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ABSTRACT

This document presents synthesized estimates of the rates of level 1 literacy by congressional district in the 50 states and District of Columbia. The estimates are extrapolations of the National Adult Literacy Survey (NALS) that were based on the findings of approximately 26,000 interviews. The document begins with an introduction containing the following: overview of the NALS; examination of what it means to be literate in the 1990s; definition of level 1 literacy (ability to perform many tasks involving simple texts and documents but difficulty using certain reading, writing, and computational skills considered necessary for functioning in everyday life); and discussion of the impact of low literacy. Presented next are answers to 12 frequently asked questions about synthetic estimates of adult literacy proficiency. The remainder of the document consists of bar graphs and maps detailing the rates of level 1 literacy by state, congressional district, county, and municipality. A total of 119 figures/tables/maps are included throughout the document. Appended is a paper, "Synthetic Estimates of Literacy Proficiency for Small Census Areas" (Stephen Reder), that describes the extrapolation techniques, which are said to be relatively accurate for individual localities with at least 10,000 inhabitants. (MN)

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ED 416 407

# THE STATE OF
# LITERACY IN AMERICA:
## ESTIMATES AT THE LOCAL, STATE, AND NATIONAL LEVELS

LITERACY
IT'S A WHOLE NEW WORLD

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**1998**

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# THE STATE OF LITERACY IN AMERICA:

## ESTIMATES AT THE LOCAL, STATE, AND NATIONAL LEVELS

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The National Institute for Literacy gratefully acknowledges the assistance of the Office of Vocational and Adult Education, Division of Adult Education and Literacy of the U.S. Department of Education, which commissioned researcher Dr. Stephen Reder of Portland State University to carry out the initial synthetic estimates, and the guidance and help of Dr. Reder throughout the development of this new presentation of the data.

# Introduction

## The State of Literacy in America:

***Estimates at the Local, State, and National Levels***

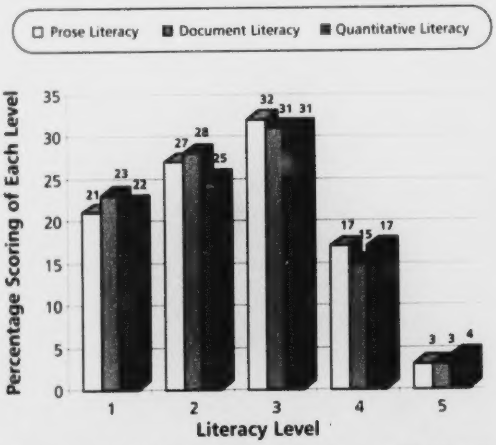
In recent years, policymakers have asked many questions — but received few real answers — about the extent of our national adult literacy problem. Some have even wondered whether low literacy is a national problem at all. Very little was known about the skills of the adult population as a whole.

### What is the NALS?

Recognizing this need, Congress in 1988 directed the Department of Education to carry out an assessment of the literacy skills of American adults. The result was the National Adult Literacy Survey (NALS), a monumental study that remains the most comprehensive, statistically reliable source of data on literacy in the United States.

Through an exhaustive process that included interviews with approximately 26,000 individuals, data were collected and, in 1993, reported at the national level. Thanks to the NALS, we now have a comprehensive and up-to-date profile of the literacy skills of American adults. The following chart summarizes the NALS findings.

**Literacy Levels of Adult Americans**



***1 represents the lowest level of proficiency; 5 the highest.***

*Source:* U.S. Department of Education, National Center for Education Statistics, National Adult Literacy Survey, September 1993.

Following the NALS release, policymakers and adult literacy workers were eager to find out exactly what these numbers meant to their own states, counties, and cities. They wanted to know where their adult population stood and how far it had to go. They were especially curious about the scope of the problem for adults with the lowest level of literacy skills — those in the greatest need of educational services.

## What's New in This Report?

We are pleased that this report provides that information. The National Institute for Literacy presents here an extrapolation of NALS data for states, counties, Congressional districts, and cities with adult populations over 5,000. It is the best estimation of how many adults have low literacy skills that we have ever had at our disposal.

The data were prepared by researcher Stephen Reder of Portland State University, and made possible by the U.S. Department of Education's Office of Vocational and Adult Education's Division of Adult Education and Literacy. Dr. Reder used sophisticated statistical modeling techniques to calculate synthetic estimates of adult literacy proficiency for these areas. (For details on the process used, please see "Frequently Asked Questions About Synthetic Estimates of Adult Literacy Proficiency.")

It is the hope of the National Institute for Literacy that this new geographic breakdown of the lowest levels of adults' literacy abilities will fuel a discussion of — and new ideas about — lifelong learning and securing higher levels of literacy for all adults as the 21st century approaches.

## What is Literacy in the 1990's?

As the world changes and the demands on individuals, families, and businesses increase, the definition of literacy also continues to shift. While concerns about inadequate literacy skills are not new, the nature of the concerns is evolving. In the past, literacy was considered the ability to read and use printed materials at an extremely basic level. Today, adults need higher levels of basic skills to function effectively in many areas of their lives, and literacy is defined more broadly to include problem-solving and higher level reasoning skills. Literacy is a range of tools that help people help themselves — and their children. It is not an end in itself, but a means to a better quality of life.

In its 1991 National Literacy Act, Congress defined literacy as:

> ***an individual's ability to read, write, and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential.***

NALS reflected this new concept of literacy. Rather than classifying individuals as either "literate" or "illiterate," NALS created three literacy scales: prose literacy, document literacy, and quantitative literacy. Each scale reflects a different type of real-life literacy task.

For example, tasks included the following:

- Finding information in texts, such as newspaper articles.
- Completing forms, such as a social security card application.
- Interpreting graphs and charts, such as a table of employee benefits.

NALS makes clear that literacy is not something individuals have or don't have. It created a literacy continuum on which people may fall at different places for different kinds of skills. NALS divided the continuum into 5 levels, with Level 5 reflecting the highest skills and Level 1, the lowest.

## What Does Level 1 Mean?

The NALS found a total of 21-23 percent — or 40-44 million — of the 191 million American adults (defined as age 16 or older) at Level 1, the lowest literacy level. Although many Level 1 adults could perform many tasks involving simple texts and documents, all adults scoring at Level 1 displayed difficulty using certain reading, writing, and computational skills considered necessary for functioning in everyday life.

The following chart details activities most adults at Level 1 usually can and cannot perform successfully:

### Skills of Adults at Level 1

| Can Usually Perform | Cannot Usually Perform |
|---|---|
| Sign one's name | Locate eligibility from a table of employee benefits |
| Identify a country in a short article | Locate intersection on a street map |
| Locate one piece of information in a sports article | Locate two pieces of information in a sports article |
| Locate the expiration date information on a driver's license | Identify and enter background information on a social security card application |
| Total a bank deposit entry | Calculate total costs of purchase from an order form |

While we are concerned about improving the literacy of all adults, we consider those scoring at the lowest level (Level 1) to be most urgently in need of nationwide attention. We want to emphasize that most of these adults are not "illiterate." They are able to perform a variety of literacy and other tasks that life requires of them. But the background data profiled in the original NALS report clearly demonstrate that these adults tend to be at a great disadvantage in our society. They do not have the full range of economic, social, and personal options that are open to Americans with higher levels of literacy skills.

Low literacy skills are closely connected to the social problems related to poverty. Nearly half (43 percent) of all adults in Level 1 live in poverty. This contrasts with only four to eight percent of those at the two highest literacy levels.

### The Impact of Low Literacy

**Poverty.** Forty-three percent of adults at Level 1 were living in poverty, compared to 4 percent of those at Level 5.*

**Welfare.** The likelihood of being on welfare goes up as literacy levels go down. Three out of four food stamp recipients performed in the two lowest literacy levels.

**Income.** Adults at Level 1 earned a median income of $240 per week, compared to $681 for those at Level 5.*

**Employment Status.** Adults at Level 1 worked an average of 19 weeks per year, compared to 44 weeks per year for those at Level 5.*

**Crime.** Seven in 10 prisoners performed in the lowest two literacy levels.

** These numbers refer to the score on the prose literacy scale. Similar differences occurred using the quantitative and document scales.*

## What's Next?

All Americans can and should be doing much more to address our nation's literacy needs. Nationally, fewer than 10 percent of adults who could benefit from literacy programs are currently being served. Public policies created at the state, local, and federal level have a tremendous impact on the number of people served and the quality of programs. In addition to the most urgent needs — more funding, better coordination among service providers, and greater collaboration with other social services — program quality could be improved through better teacher and tutor training; greater availability of support services, such as child care and transportation; and better instructional materials that include new technologies.

While the education, labor, human services, and health care communities have begun to think about literacy across agency lines, more attention is needed because our success as a nation demands basic literacy skills for all adults. As an adult literacy student in Jackson, Mississippi explains, "Without an education in the year 2000, we the people will be in serious trouble. Because now everything is moving forward fast and without an education you will be moving nowhere."

*For information on how you can help, call the National Institute for Literacy Hotline at 1-800-228-8813 or visit NIFL's Website at http://www.nifl.gov.*

## Related Resources

Literacy Behind Prison Walls, U.S. Department of Education, National Center for Education Statistics, October 1994.

Literacy of Older Adults in America, U.S. Department of Education, National Center for Education Statistics, November 1996.

Literacy and Dependency: The Literacy Skills of Welfare Recipients in the United States, Educational Testing Service, 1995.

*Additional NALS information is available at: http://nces.ed.gov/nadlits.*

# Frequently Asked Questions (FAQs)

## About Synthetic Estimates of Adult Literacy Proficiency

*by Stephen Reder*

| | |
|---|---|
| 1. **What does "synthetic estimate" mean?** | Synthetic estimates combine information from different data sources to produce estimates of information not available in any one source by itself. One common type of synthetic estimate extrapolates the results of a survey from one area or population to another. |
| 2. **What are synthetic estimates of adult literacy proficiency?** | The estimates of adult literacy proficiency presented here combine information from the National Adult Literacy Survey (NALS) and the 1990 U.S. Census to estimate adult literacy proficiencies in geographical areas not adequately sampled by NALS. These areas include many states, congressional districts, counties, large towns, and cities. |
| 3. **Who produced these estimates?** | These estimates of adult literacy proficiency were prepared by Stephen Reder of Portland State University. Robert Fountain, director of the Statistical Consulting Laboratory at Portland State University, provided technical advice on statistical procedures. Chris Wingerd and Charlie Mauck helped with the construction of databases and with running statistical programs. Computer software to display the estimate database was programmed by David Lowry and Charlie Mauck (Windows version) and by Cavanaugh and Theodore Latiolais (Macintosh version). This work was funded by the U.S. Department of Education, Office of Adult and Vocational Education. Sean Forrest of UUCOM, Inc. developed the Internet implementation of the database display. |

### 4. How were reliable estimates obtained for areas in which the NALS collected little or no data?

The estimation process relied on a model that predicted NALS literacy proficiencies from Census-like variables about adults' demographic characteristics, level of education, ability to speak English, and so forth. The model's predictions were then compared to state- and county-level NALS information to gauge the accuracy of the estimates. The model reliably predicted the literacy proficiencies assessed by NALS in numerous sampled geographical areas. This predictive model was then applied to other geographic areas for which the U.S. Census had accurately measured those same predictive characteristics.

### 5. How were these estimates of adult literacy validated?

The National Adult Literacy Survey included a sample of states and counties. The predictions of the model used for this report were compared with the actual literacy proficiencies surveyed by NALS from these areas. The accompanying technical report (Appendix 1) describes the validation process and results in detail. The state-level and county-level predictions appear to be reasonably accurate. Because NALS identified the state and county but not the congressional district, city, or town in which respondents resided, it was possible to validate the model directly only at the state and county levels. It seems likely, however, that a predictive model that fits counties well will also fit most congressional districts, large towns, and cities well.

### 6. How accurate are synthetic estimates of adult literacy?

Estimates such as these are generally less accurate than survey estimates. The estimates of adult literacy proficiency provided here are based on a number of assumptions beyond those made in the NALS survey. Under these assumptions, it was possible to determine the degree of uncertainty associated with the estimates. A confidence interval (a range in which the true NALS value is expected to occur 95 percent of the time) was calculated for each estimate in the database. For example, consider an estimate that 15 percent of adults in a specific county have literacy proficiency at the lowest level (Level 1). The 95 percent confidence interval might be determined in this case to be between 12 percent and 18 percent, indicating that the actual NALS percentage is very likely to fall somewhere in this 6-point interval.

The widths of the confidence intervals for estimates of adult literacy proficiency varied considerably. Among thousands of counties, for example, the 95 percent confidence intervals for adults in Level 1 had a median width of about 6 percentage points, as the above example did. This means that half of all such estimates had confidence intervals smaller than 6 percentage points (the smallest was 4 points), and half were larger than 6 percentage points (the largest was 17 points).

A confidence interval of 10 percentage points or less (+ or - 5 percent) is generally accepted by statisticians to be reliable. Estimates included in this report that have a confidence interval greater than 10 points have been noted with an asterisk to indicate that the figure may be less reliable. For the record, fewer than 500 of the more than 7,500 estimates included in this report had a confidence level that exceeded 10 percentage points.

### 7. Why are estimates produced for combined literacy proficiency rather than separately for prose, document, and quantitative literacy?

Separate synthetic estimates certainly could have been generated for each of the NALS literacy scales. But the three NALS scales are, in fact, very highly correlated and, for many purposes, can be well represented by a general literacy proficiency measure. Because of the large amount of information required for a database of estimates covering thousands of local areas, it was decided to estimate only an overall literacy proficiency measure, calculated as the average of the prose, document, and quantitative scores.

| | |
|---|---|
| **8. Can estimates such as these replace direct surveys?** | Absolutely not. While estimation may be a reasonably cost-effective way of extrapolating survey results to other areas, it is usually not as accurate as a survey. |
| **9. Can we generate adult literacy estimates for specific groups based on age, employment status, gender, educational attainment, or other characteristics?** | Unfortunately, no. This estimation technique already depends on the covariation of adult literacy proficiency with other population characteristics. For most characteristics that are associated with adult literacy, no further reliable breakdown of the estimates is feasible. |
| **10. Can we create accurate adult literacy estimates using more recent population data than the 1990 Census?** | Although this could be tried, it seems unlikely to produce reliable estimates. Both the Census and NALS were designed as "snapshots" of a population at a fixed point in time. The estimation model depends strongly on a tight linkage between these two sets of data, and no more recent population database exists that includes the necessary indicators. Such a linkage would not be present if the predictive model based on combining Census and NALS were applied to a different source of population data. |
| **11. Can we generate accurate estimates of changes in our area's adult literacy proficiency since the NALS survey?** | An accurate updating of literacy statistics for a given area requires a great deal of information that is not present in either the 1990 Census or the NALS. Changes in the overall literacy proficiencies of an area depend on knowing: |

a) the literacy proficiencies of entering adults — those who migrated into the area since the NALS or those who were too young at the time of the NALS to have been counted as adults

b) the literacy proficiencies of exiting adults — those who have died or migrated out of the area since the NALS

c) changes over time in the literacy proficiencies of adults who were in the area at both times

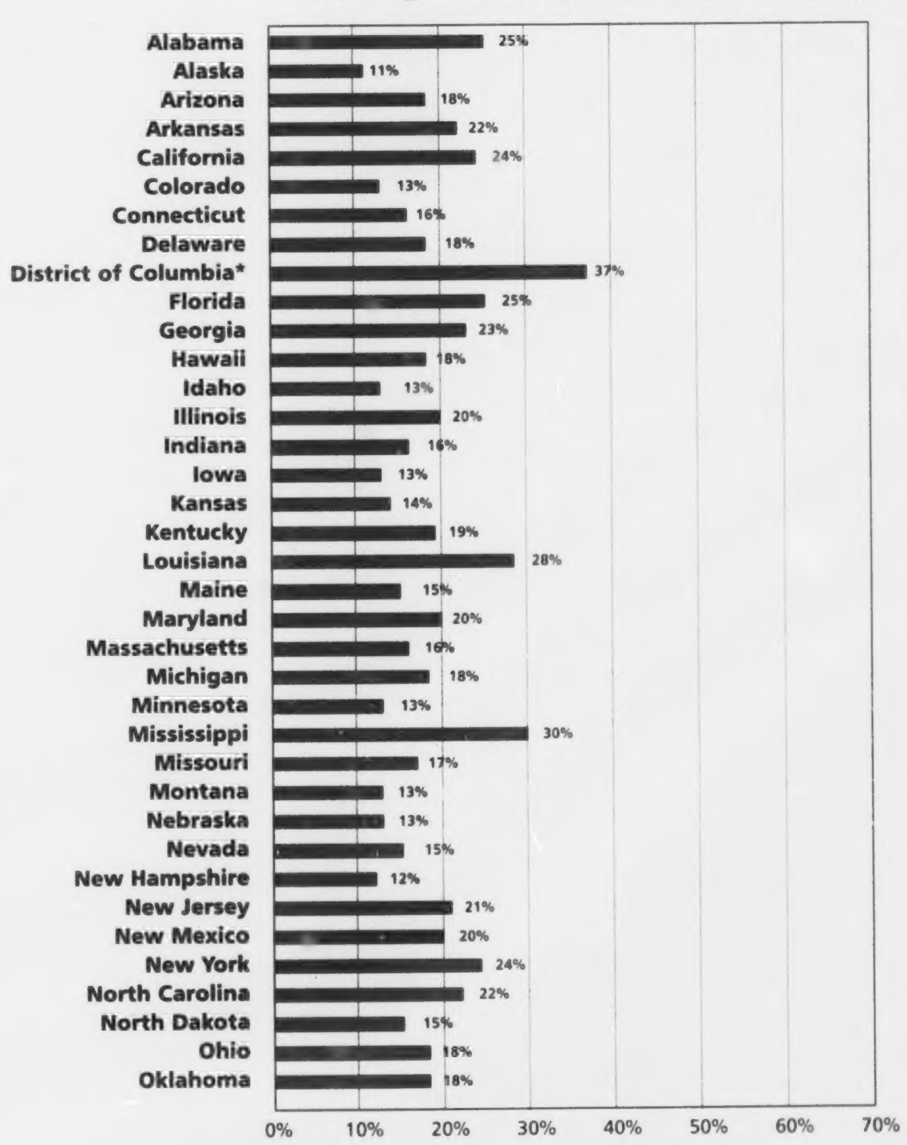
Although for some areas more recent demographic information is available that might partially address a) and b), complete information that addresses a), b), and c) is not available. Additional surveys are almost certainly needed to accomplish this.

**12. Where can I learn more about the methods used to create these estimates of NALS proficiencies?**

A downloadable technical report accompanies the synthetic estimates database on the National Institute for Literacy's home page (http://www.nifl.gov). Further questions may be directed by email to Stephen Reder at reder@pdx.edu.

# The State of Literacy in America

## Individual States

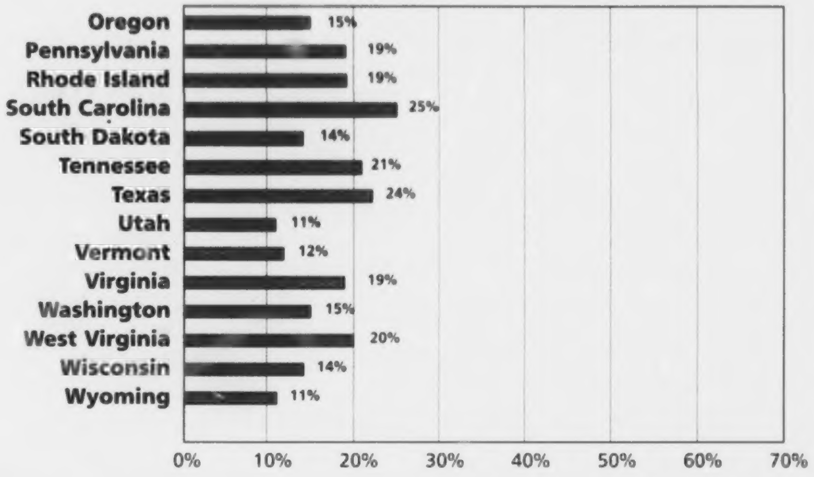


* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Individual States (cont.)

**Percentage of Adult Population at Level 1 Literacy**



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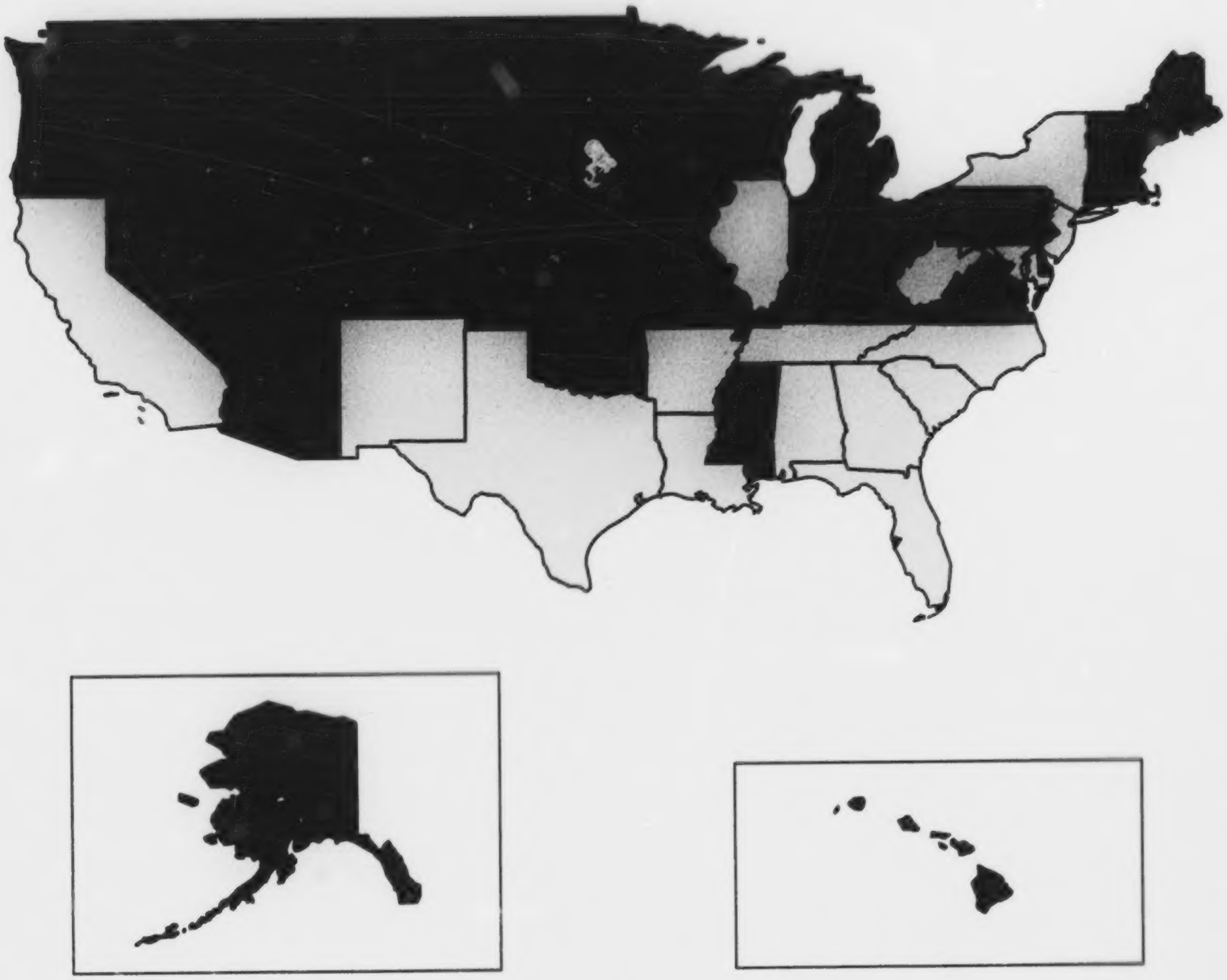
# The State of Literacy in America

## Level 1 Literacy Rates by State



Source: U.S. Department of Education
Division of Adult Education and Literacy

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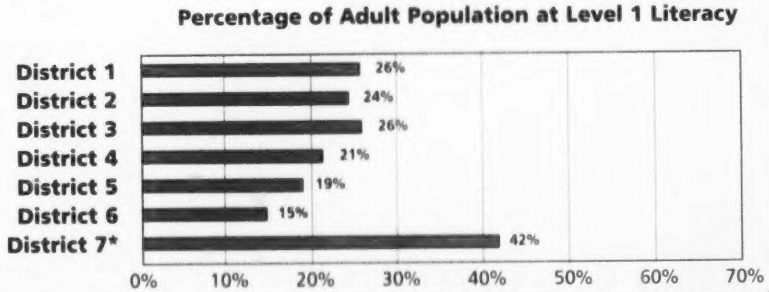
Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

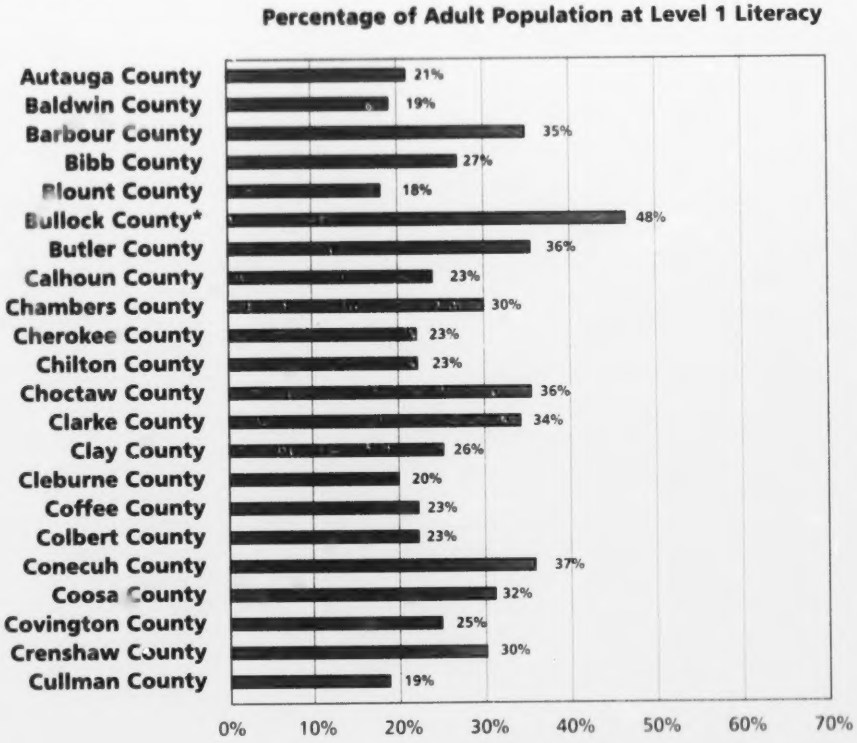
# Alabama

## 25% of adult population is at Level 1 Literacy

### Congressional Districts


Percentage of Adult Population at Level 1 Literacy

### Counties (with adult populations of at least 5,000)


Percentage of Adult Population at Level 1 Literacy

* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

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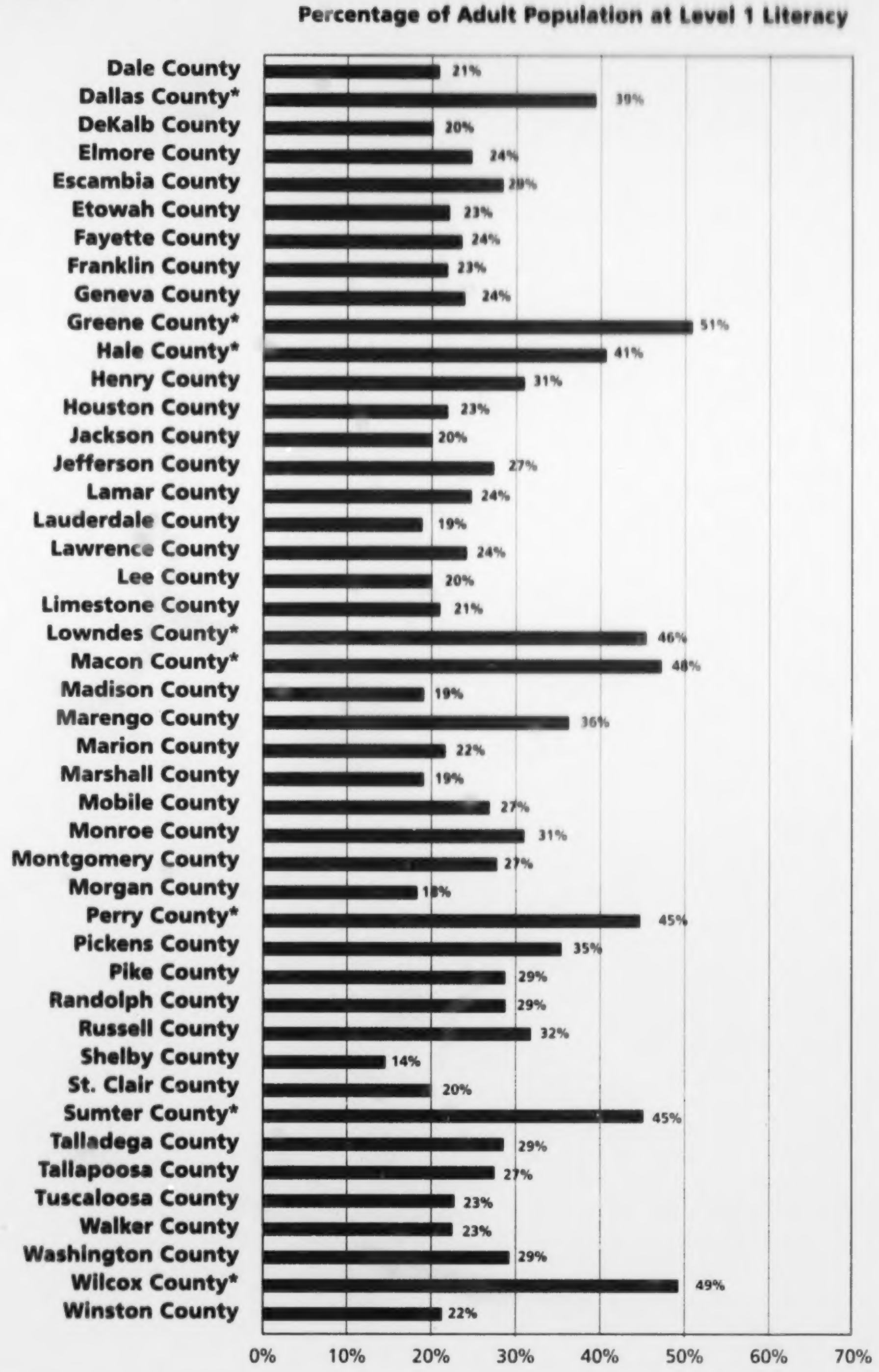
## Counties (cont.)



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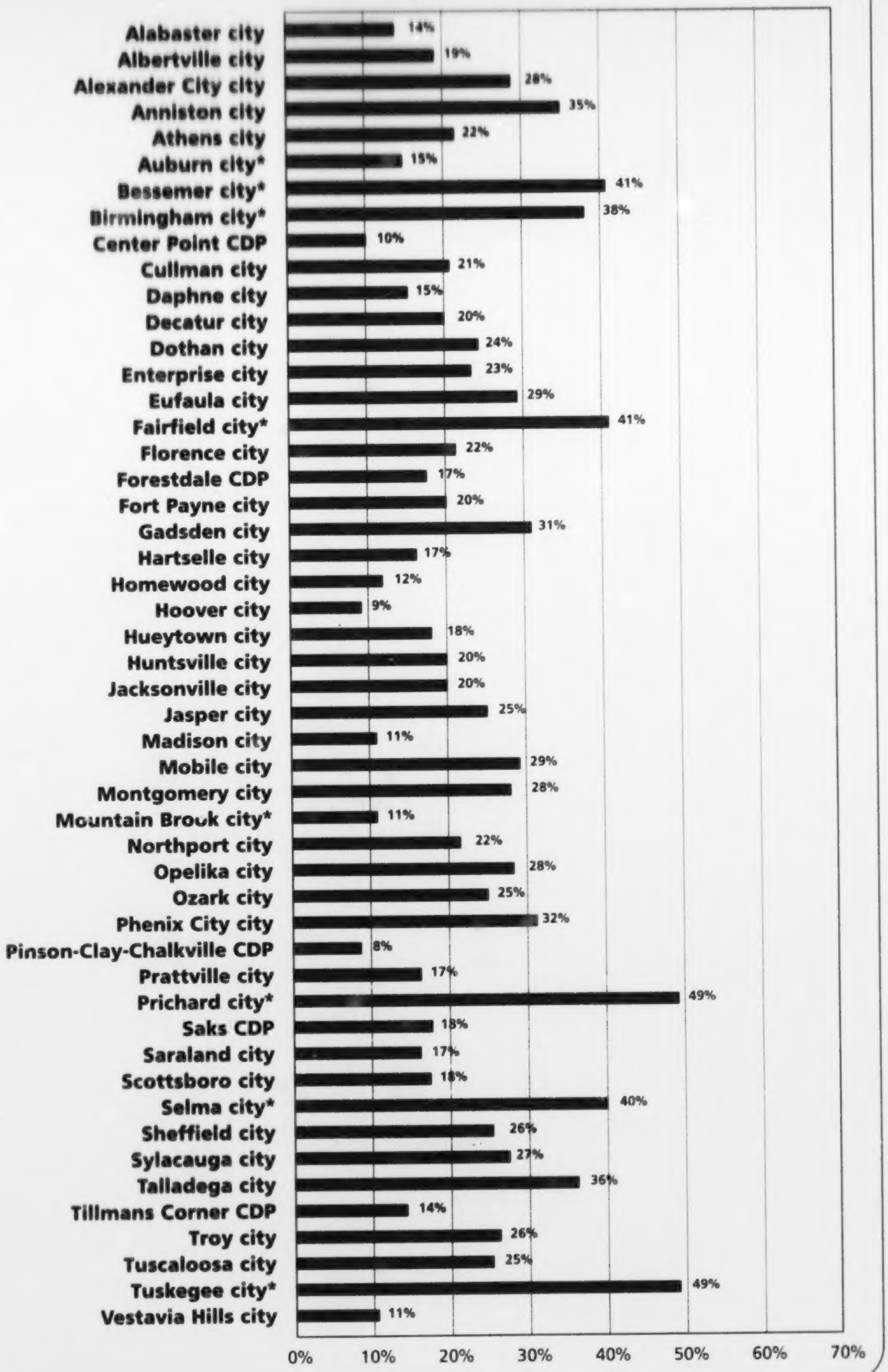
## Municipalities (with adult populations of at least 5,000)

**Percentage of Adult Population at Level 1 Literacy**



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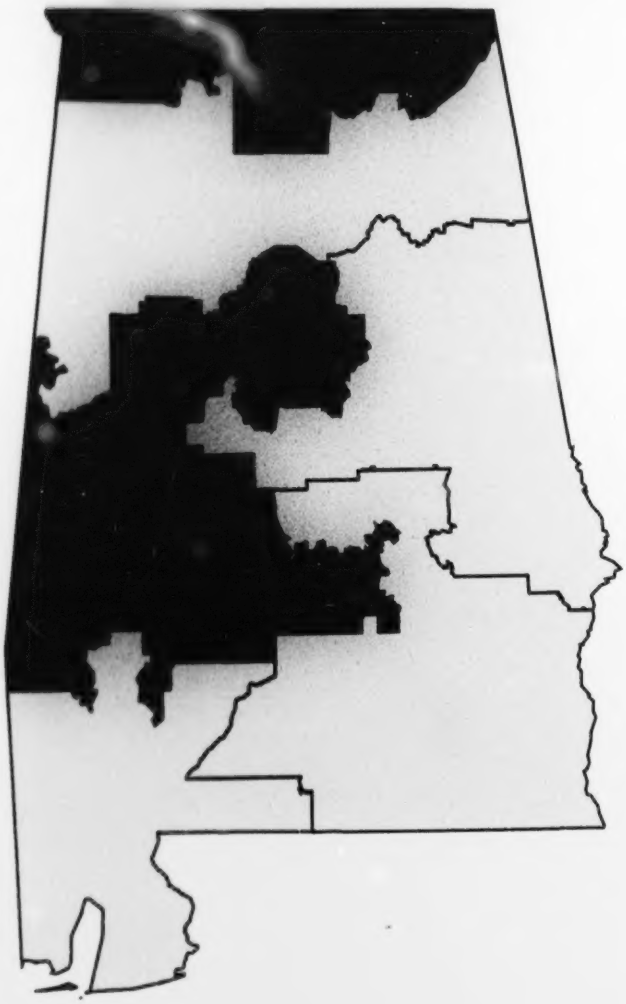
# The State of Literacy in America: Alabama

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

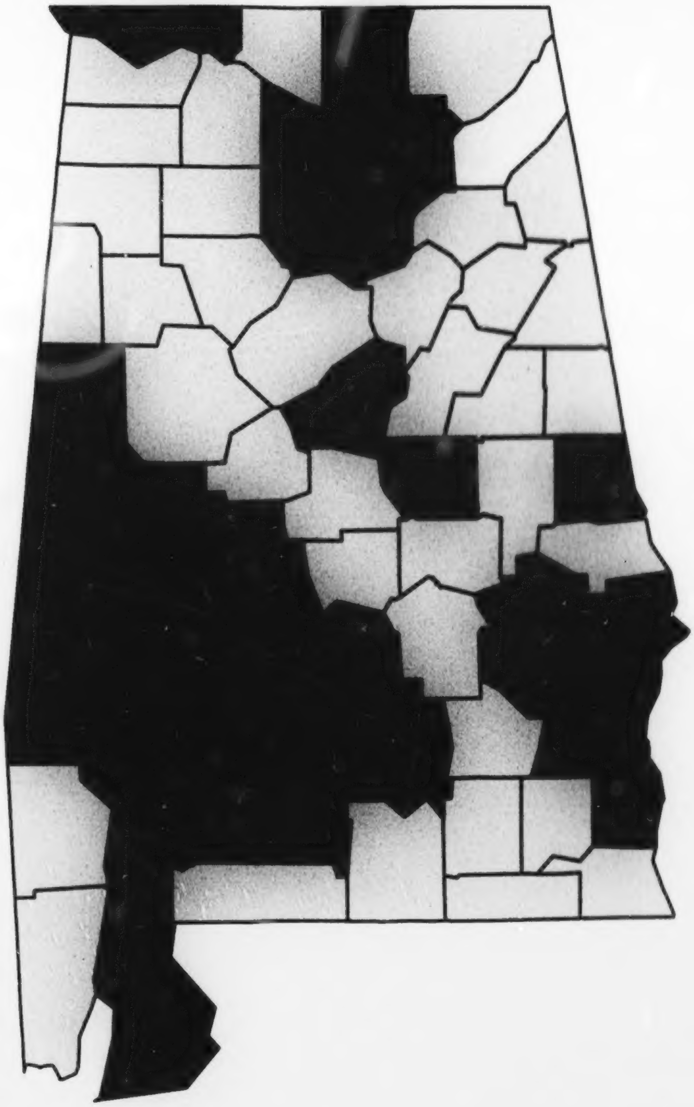
■ 30% or greater (1)
□ 20% to 30% (1)
■ 15% to 20% (1)
■ 10% to 15% (4)
■ 10% or less (6)
□ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Alabama

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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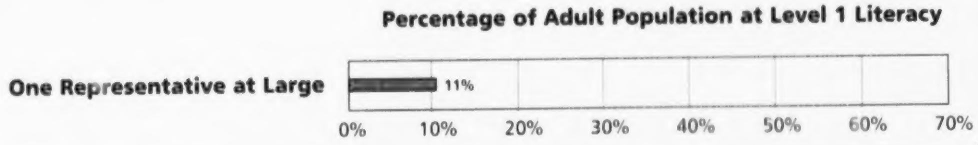
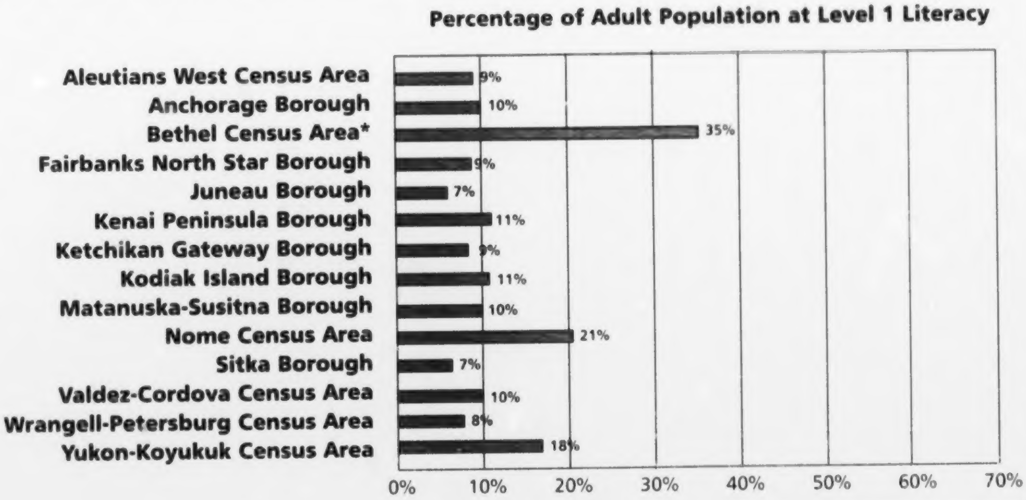
# Alaska

## 11% of adult population is at Level 1 Literacy

## Congressional Districts



## Counties (with adult populations of at least 5,000)



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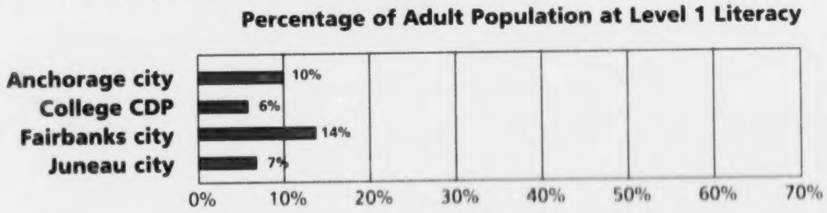

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# The State of Literacy in America: Alaska

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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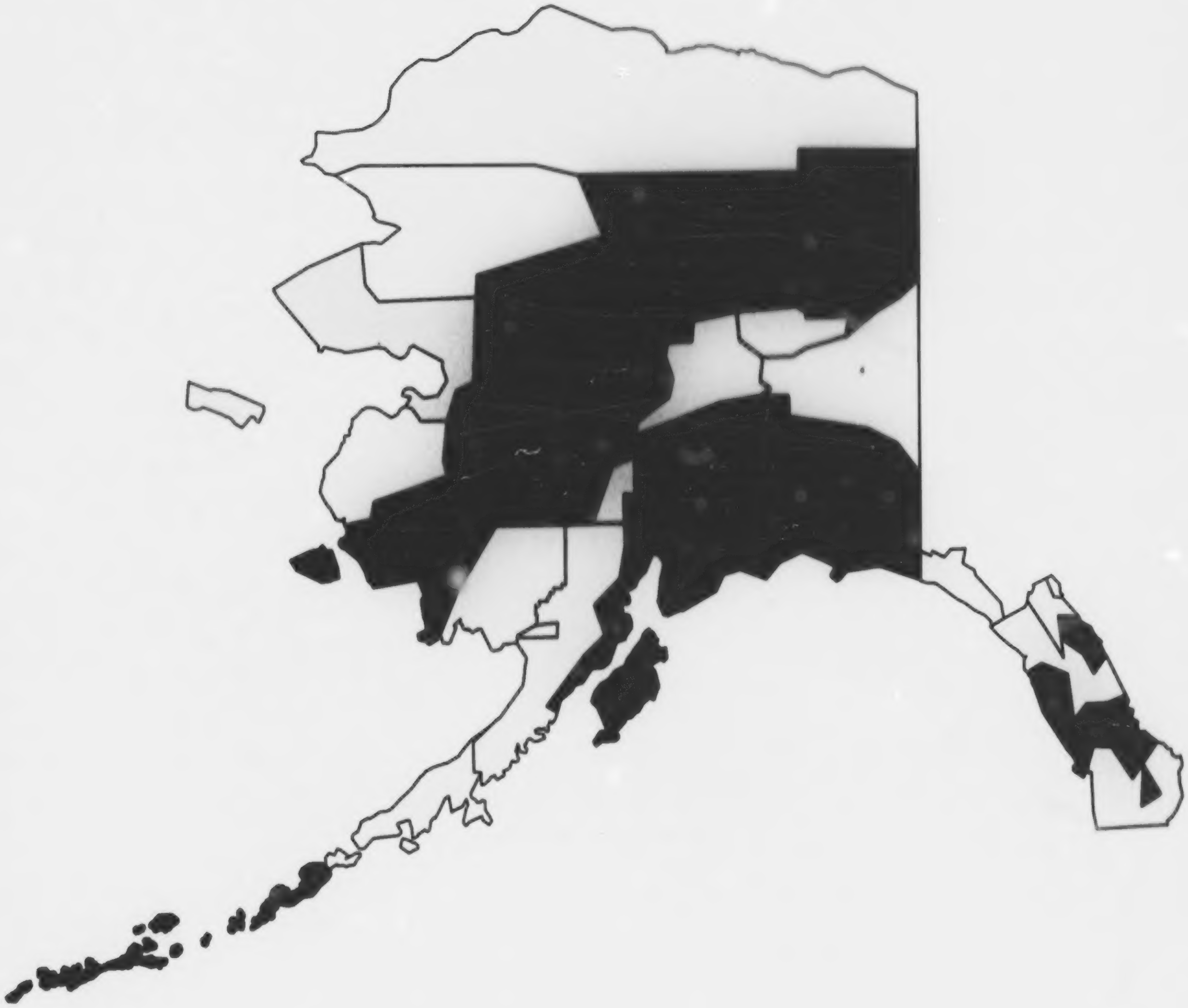
# The State of Literacy in America: Alaska

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
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Source: U.S. Department of Education
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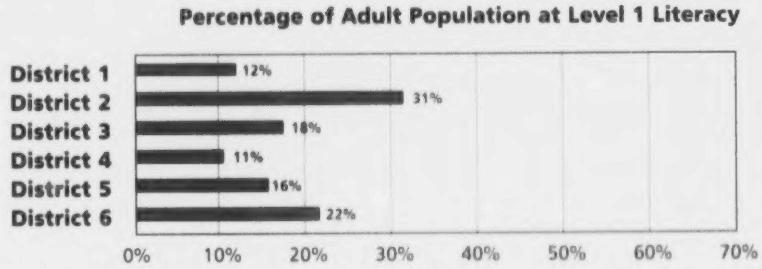
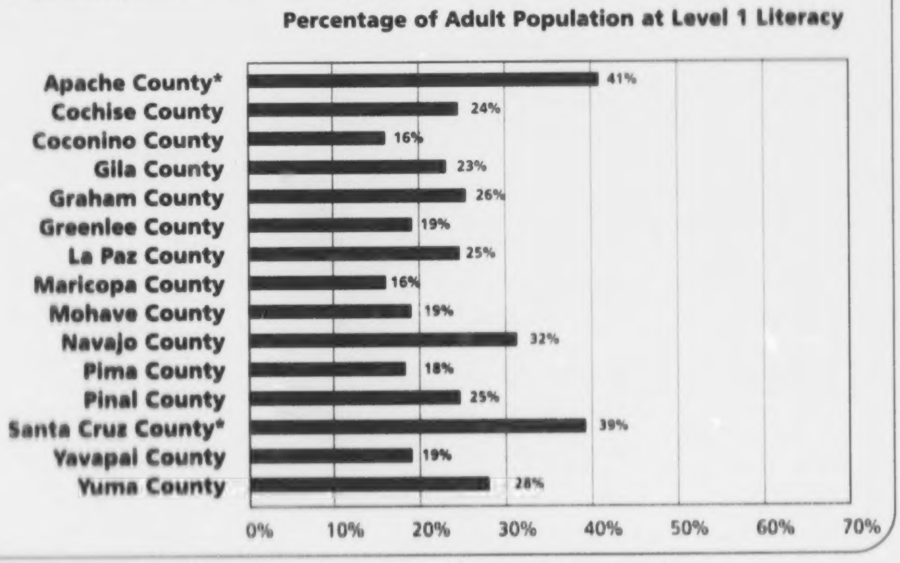
# Arizona

## 18% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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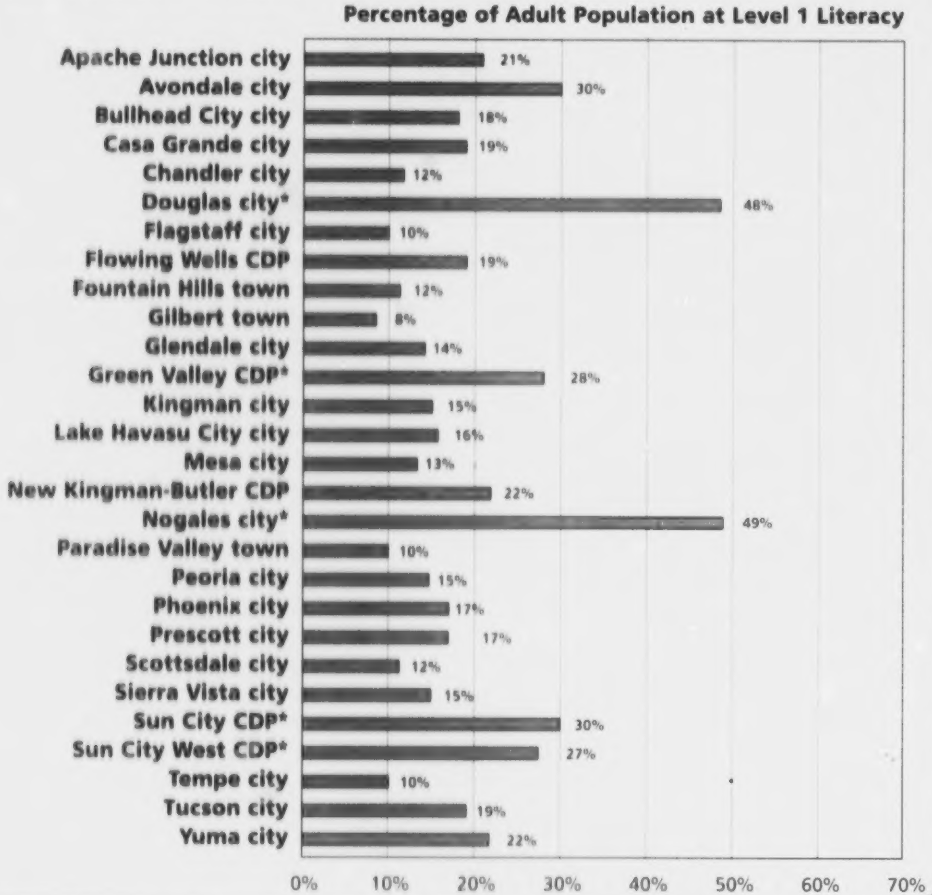
## Municipalities (with adult populations of at least 5,000)



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# The State of Literacy in America: Arizona

## Level 1 Adult Literacy Rates, by Congressional District

**Percentage of adult population with Level 1 Literacy skills**

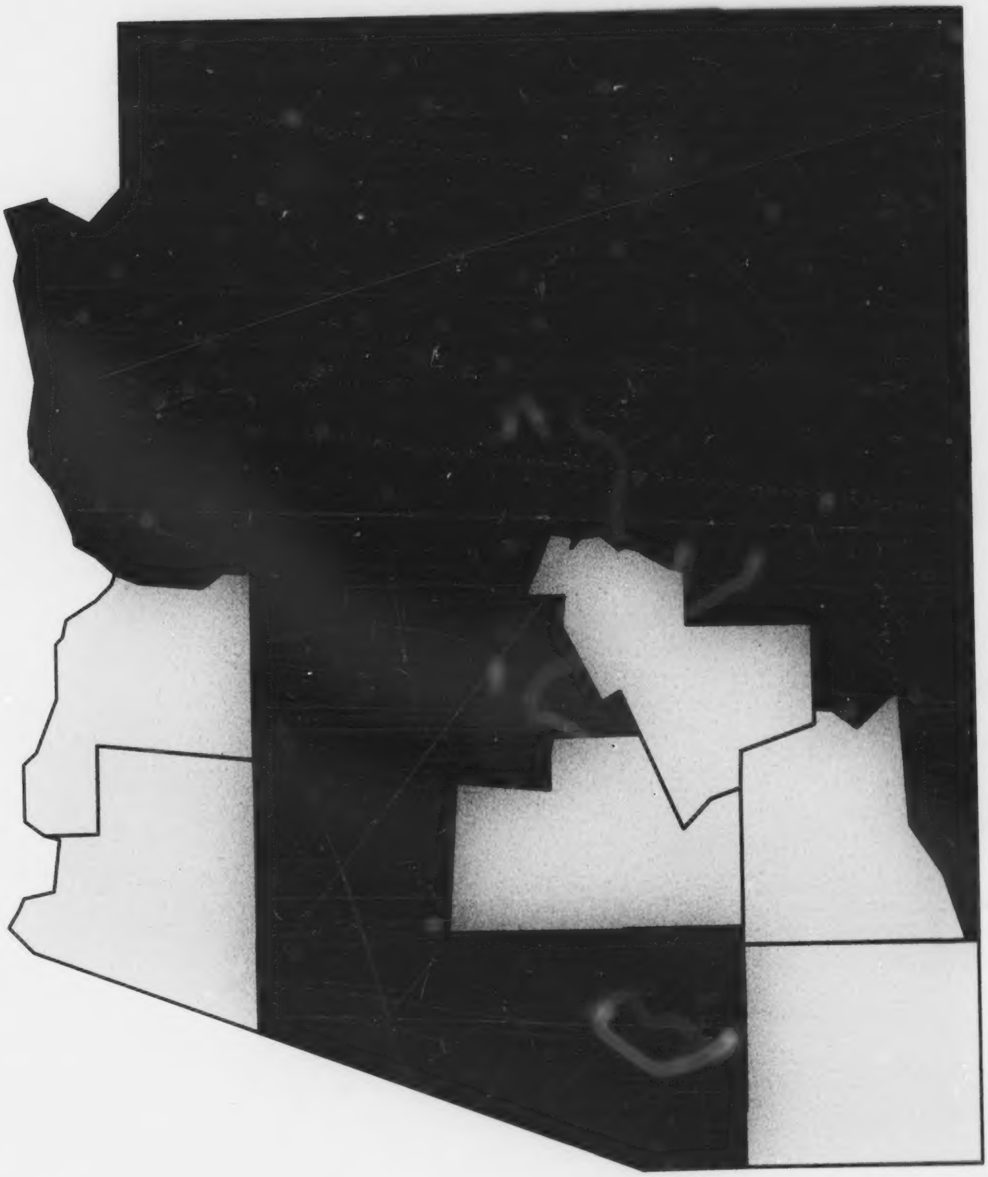
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Arizona

## Level 1 Adult Literacy Rates, by County

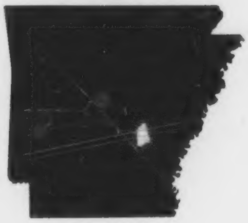


**Percentage of adult population with Level 1 Literacy skills**

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

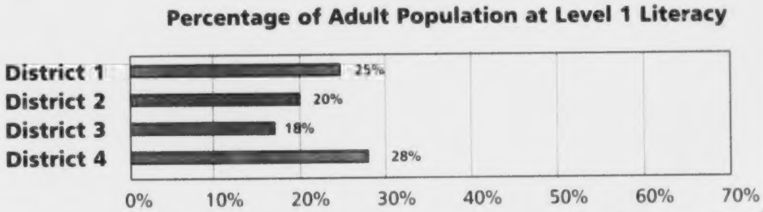
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).



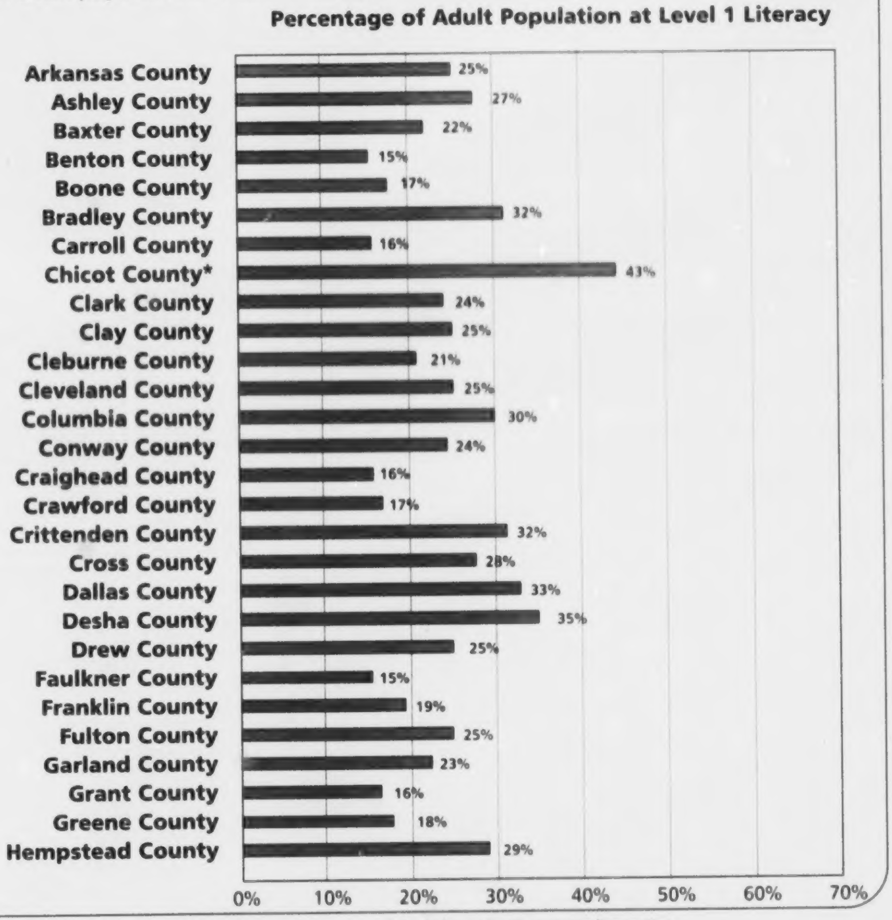
# Arkansas

## 22% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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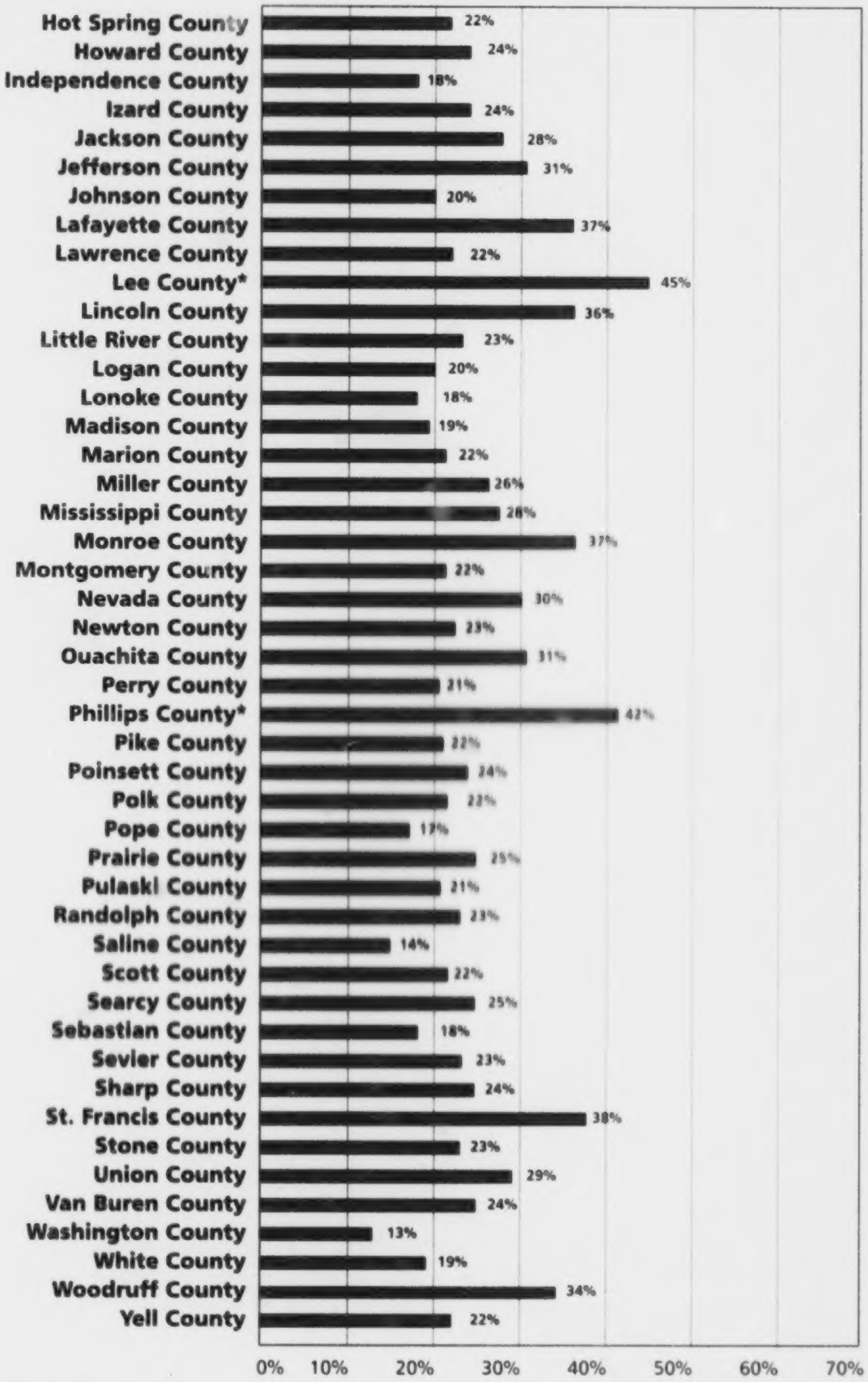
## Counties (cont.)

Percentage of Adult Population at Level 1 Literacy



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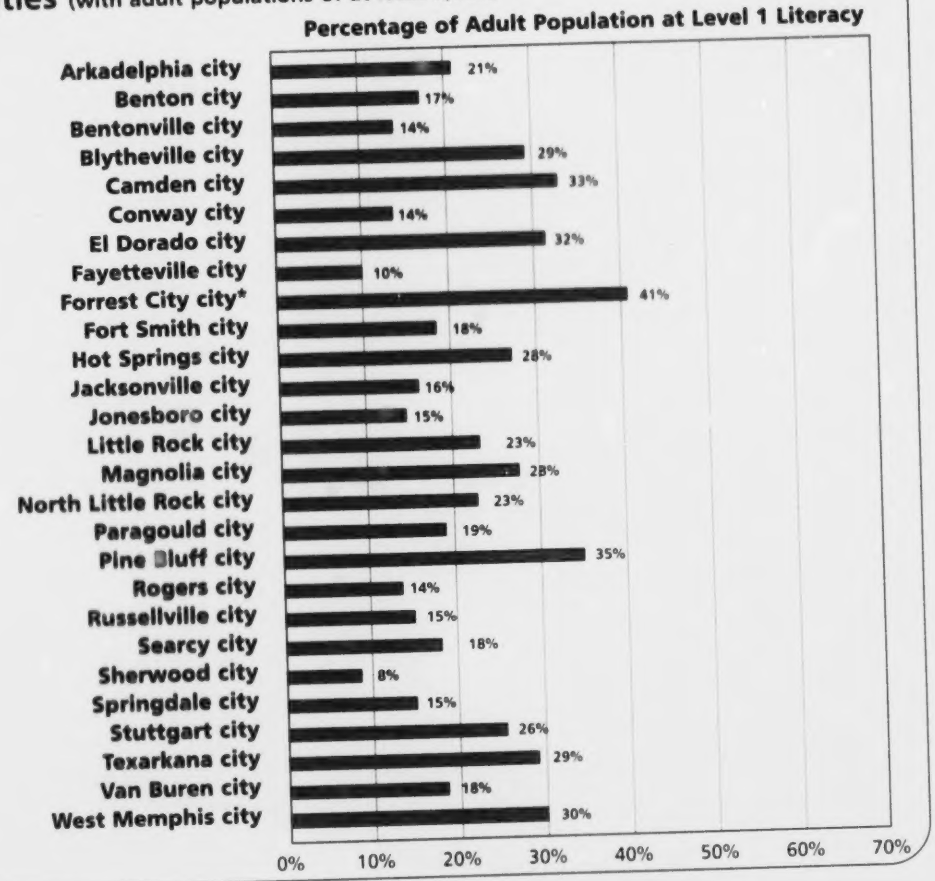
## Municipalities (with adult populations of at least 5,000)


Percentage of Adult Population at Level 1 Literacy

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Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

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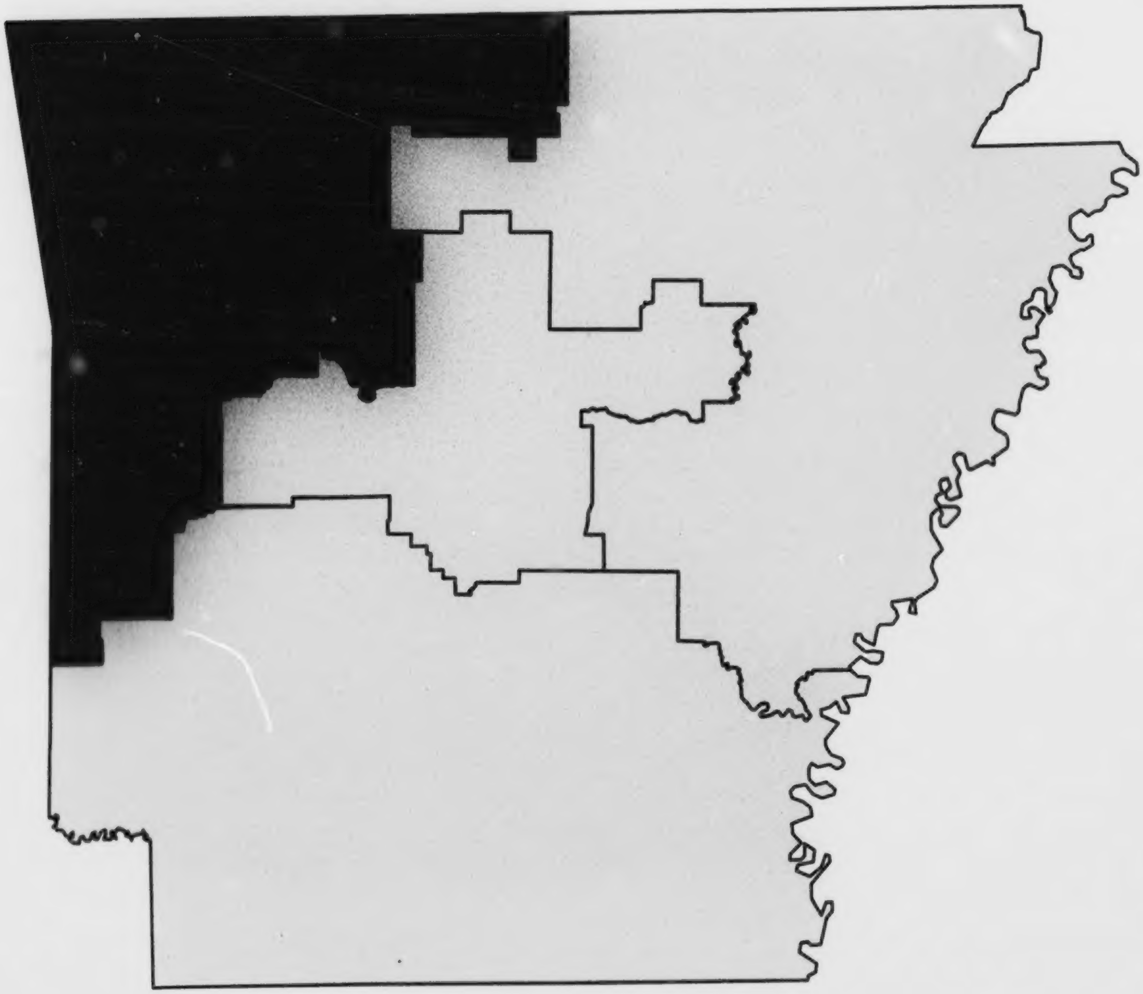
# The State of Literacy in America: Arkansas

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

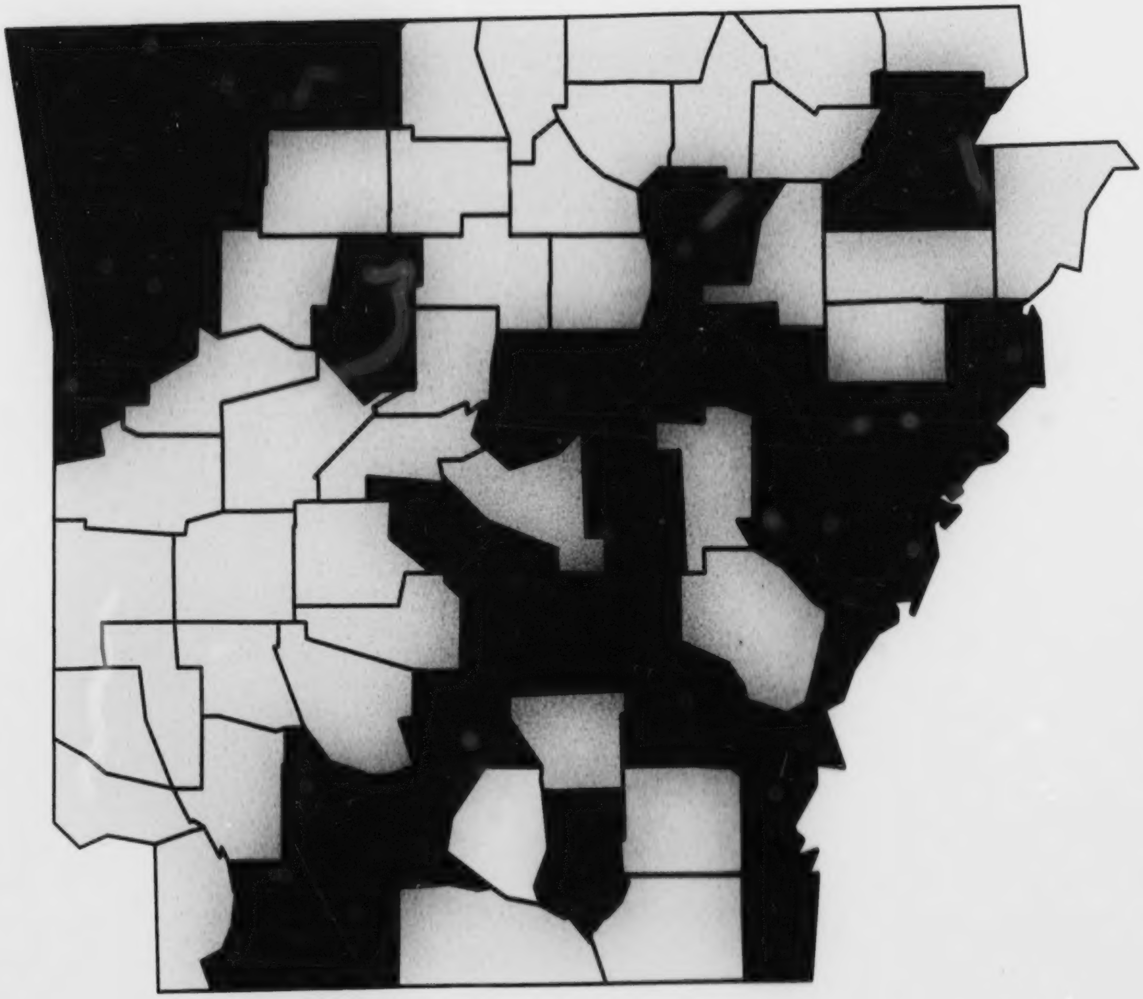
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Arkansas

## Level 1 Adult Literacy Rates, by County



Source: U.S. Department of Education
Division of Adult Education and Literacy

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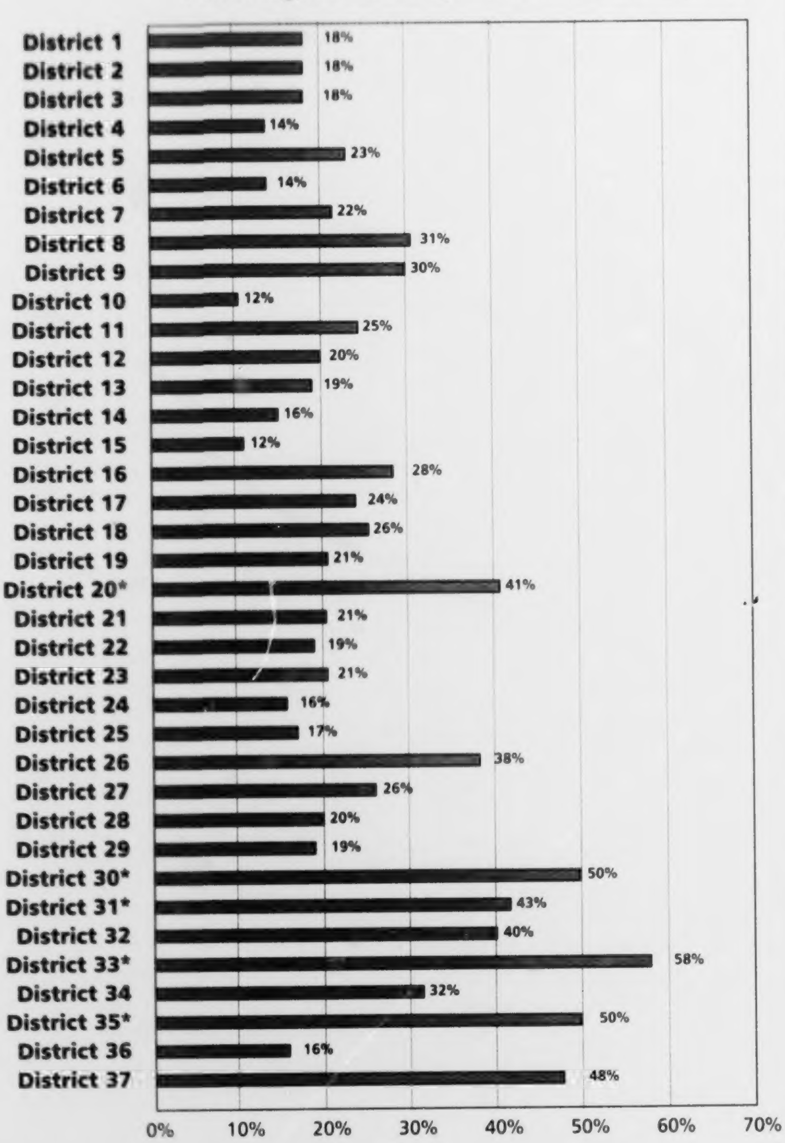
Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

# California

## 24% of adult population is at Level 1 Literacy

### Congressional Districts



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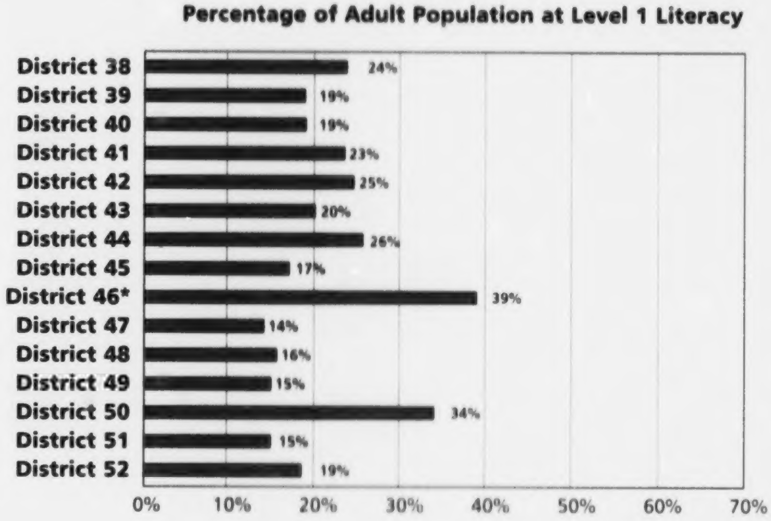
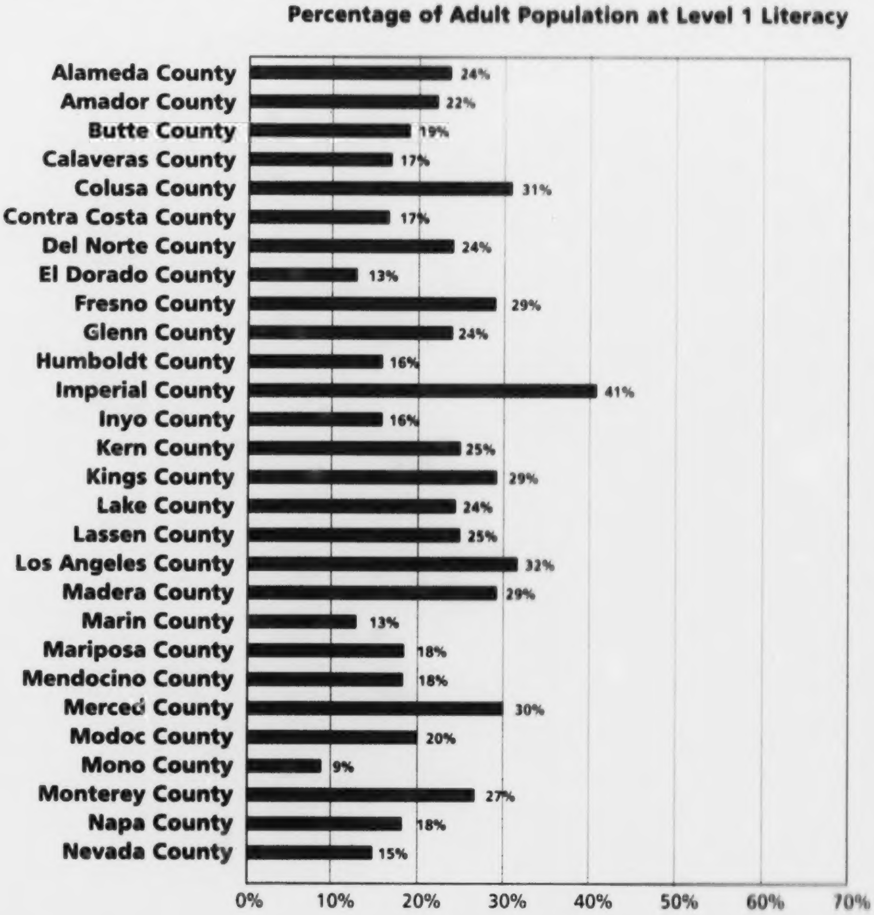
## Congressional Districts (cont.)



## Counties (with adult populations of at least 5,000)



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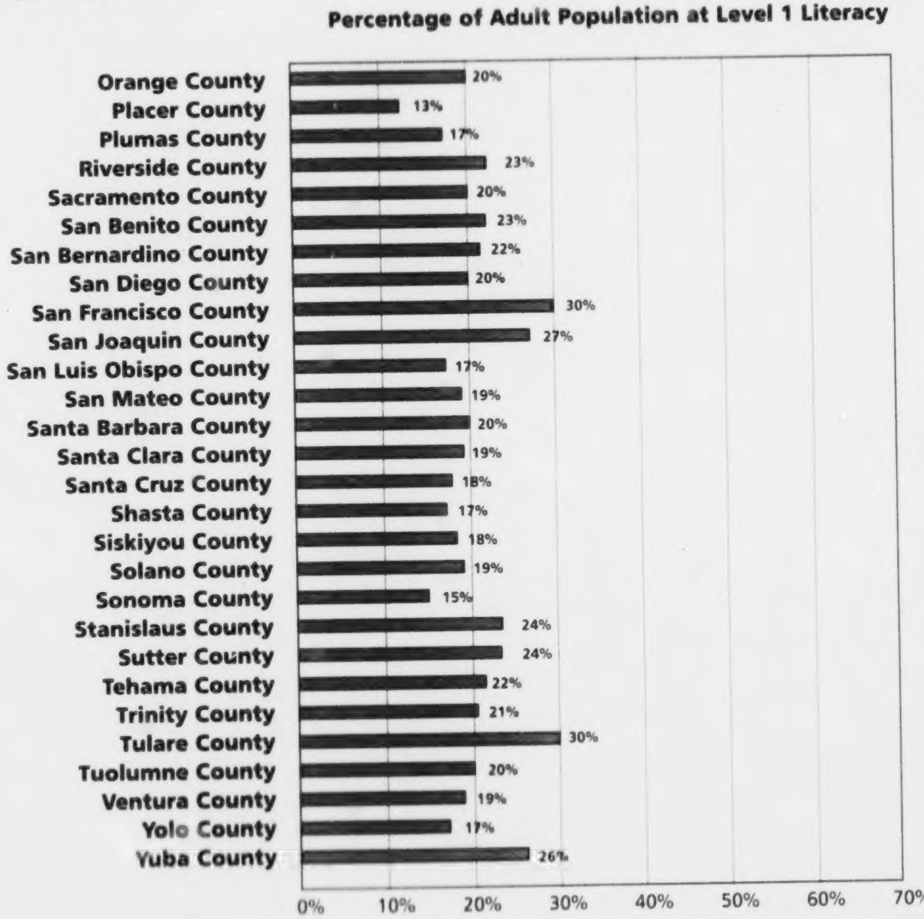
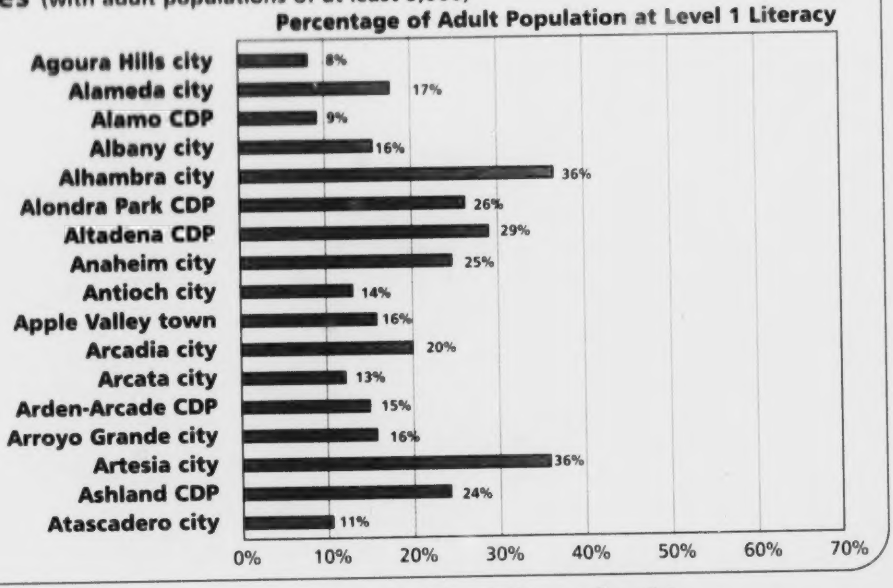
## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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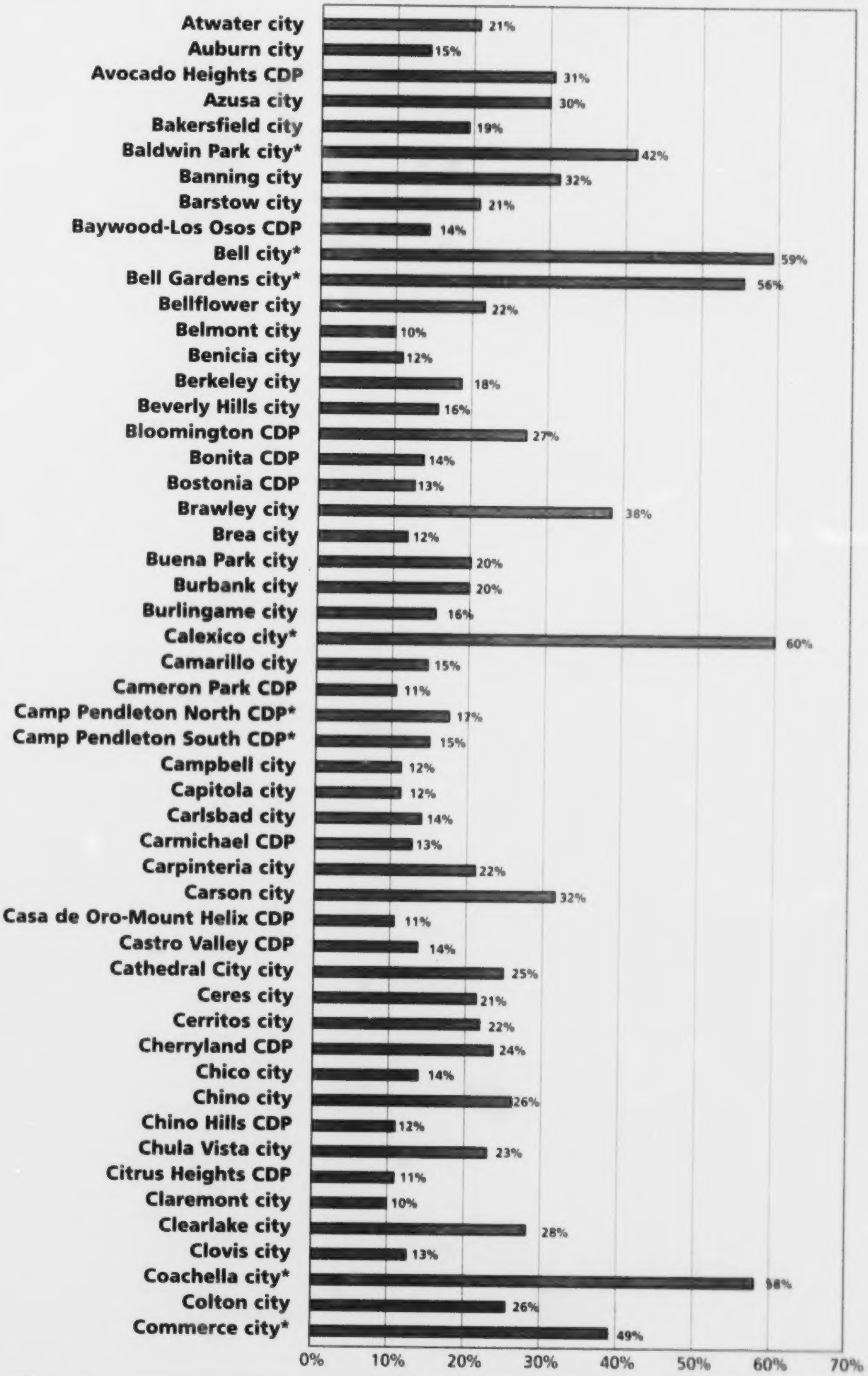
## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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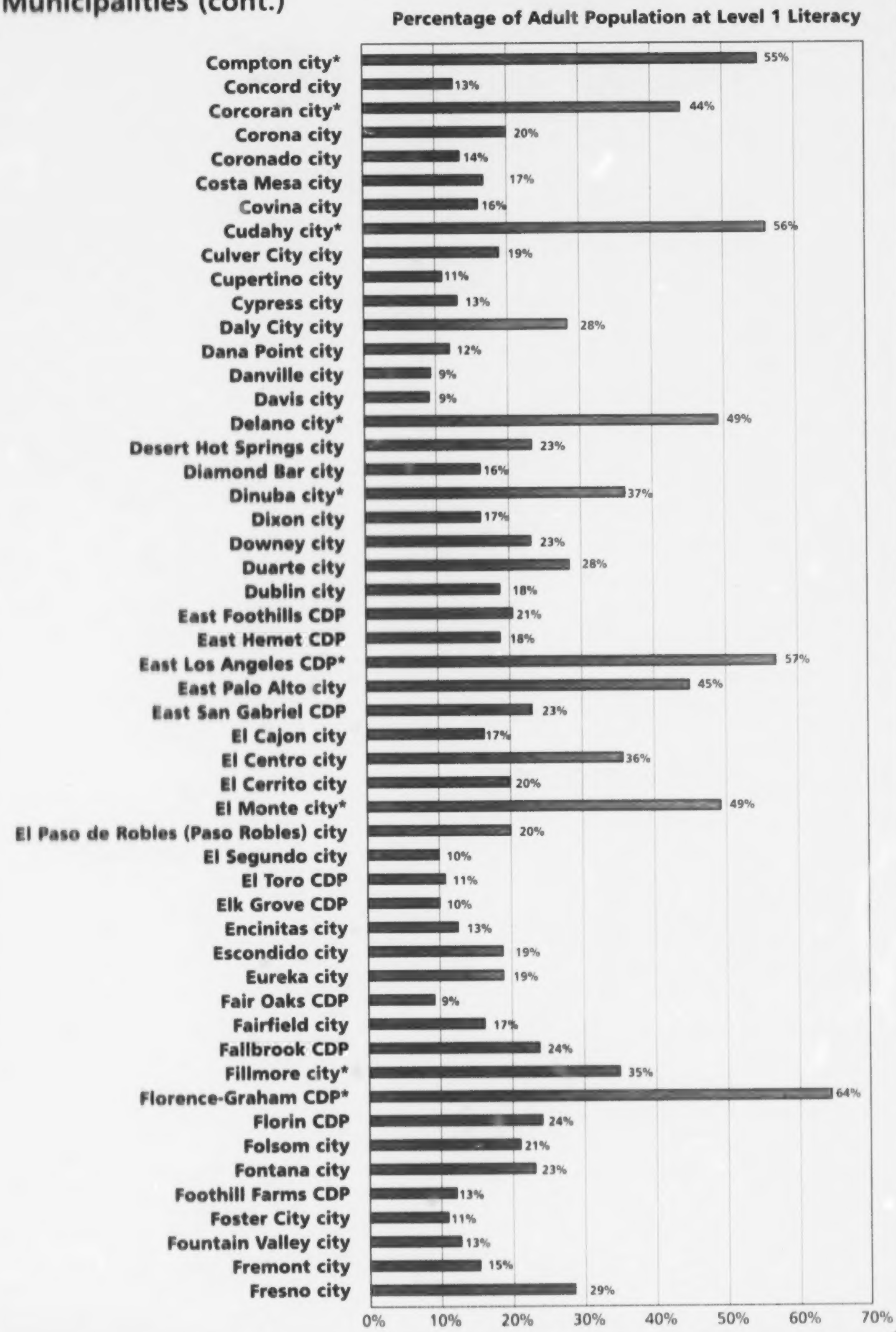
## Municipalities (cont.)



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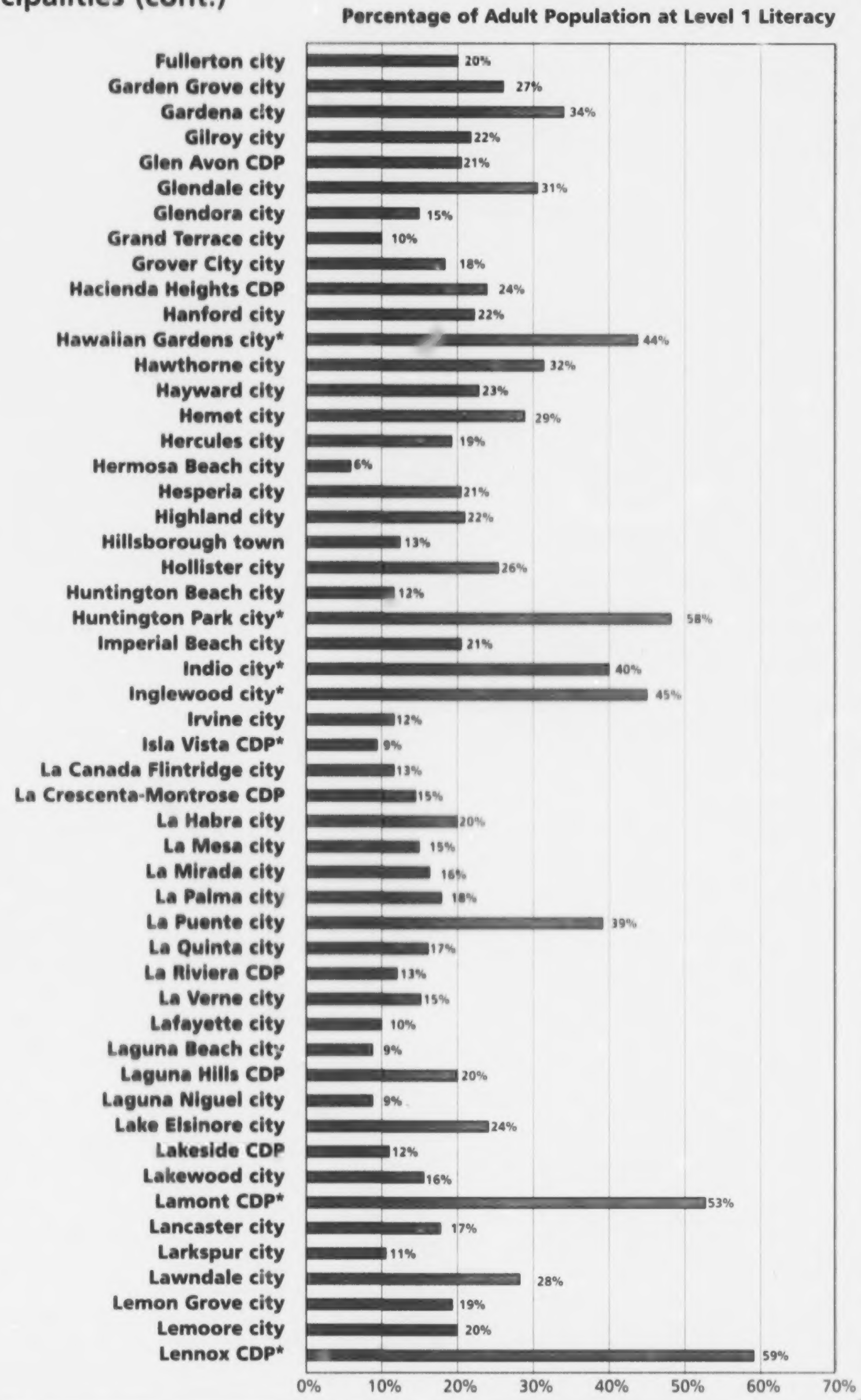
## Municipalities (cont.)



Percentage of Adult Population at Level 1 Literacy

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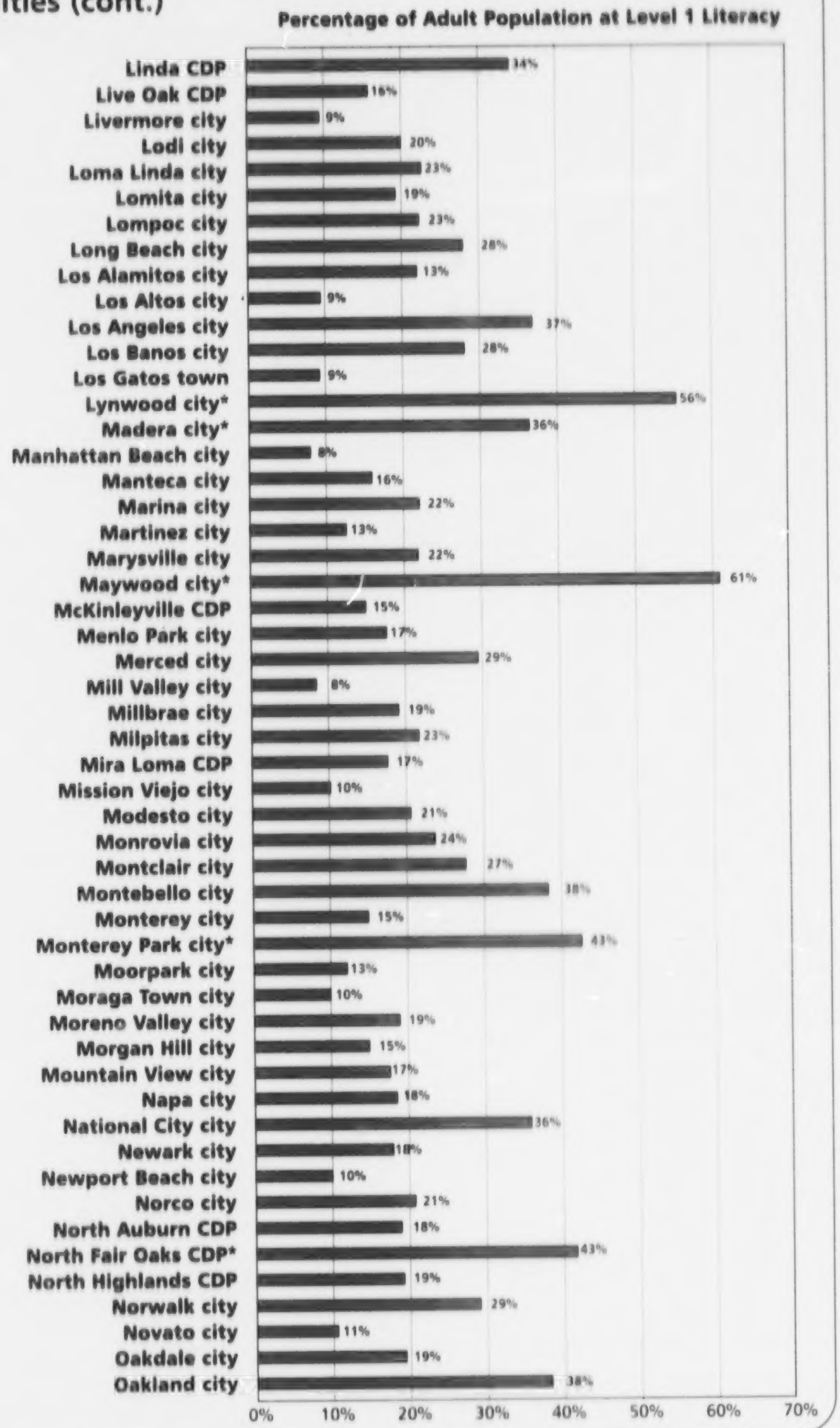
## Municipalities (cont.)



Percentage of Adult Population at Level 1 Literacy

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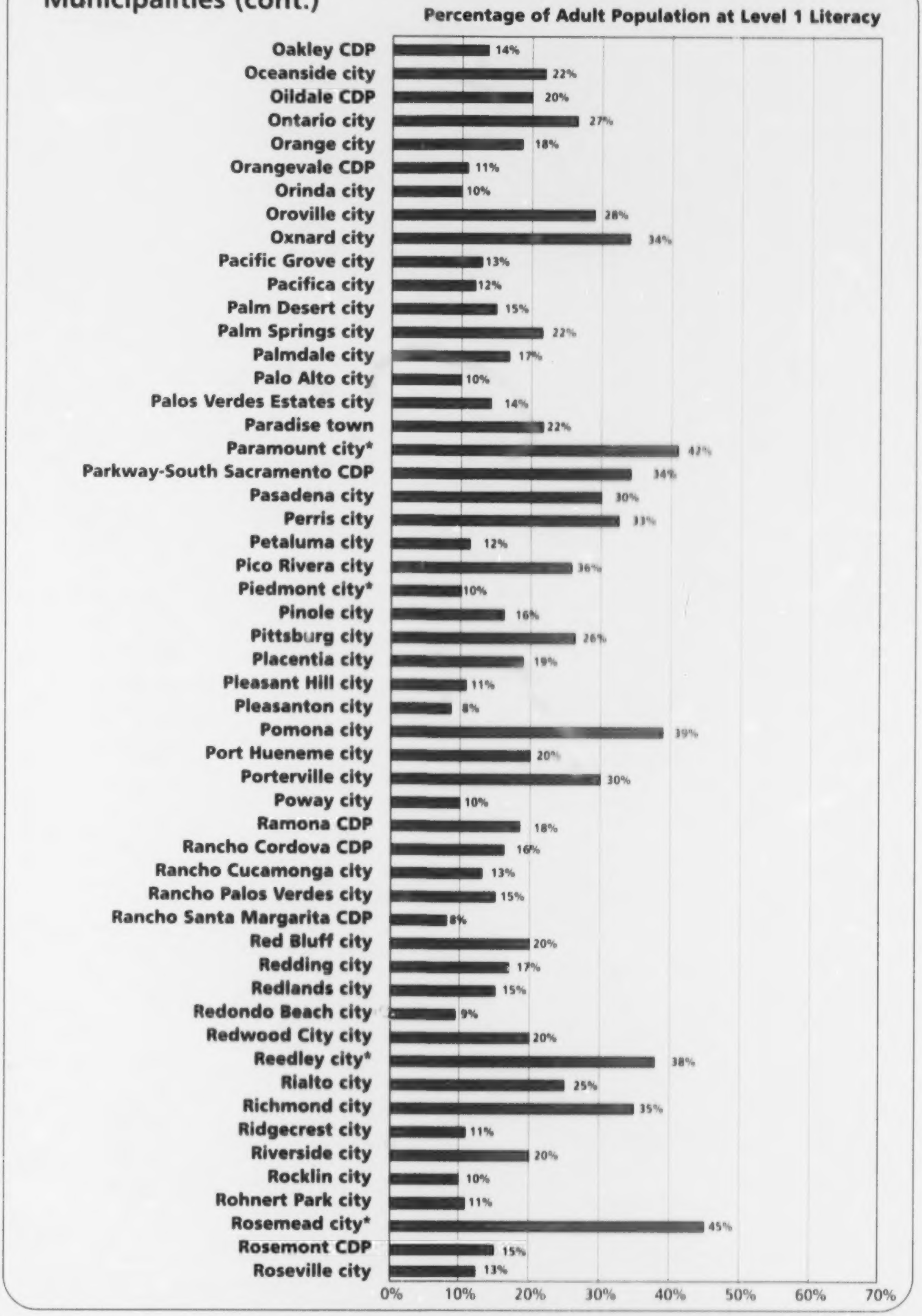
## Municipalities (cont.)



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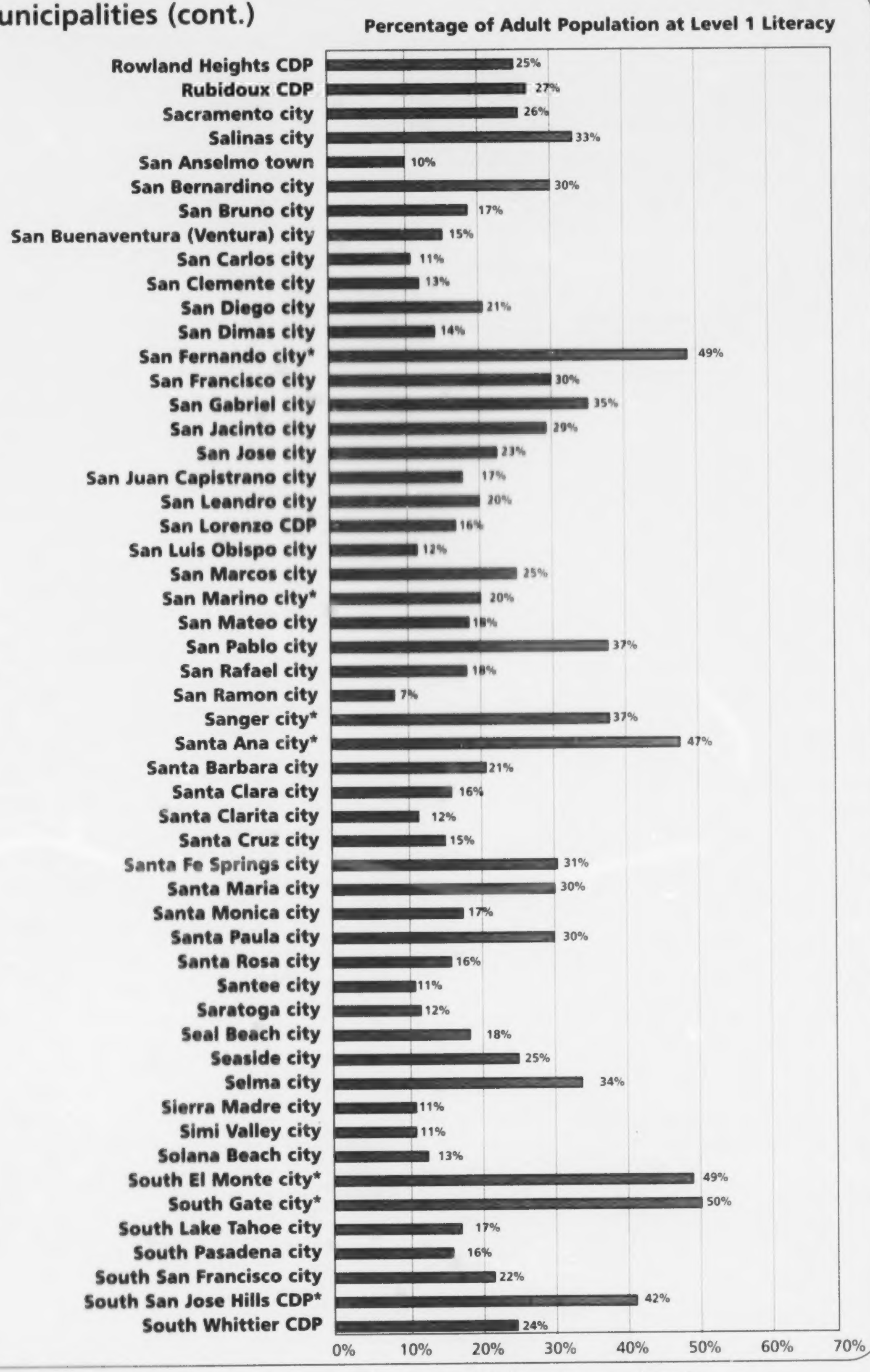
## Municipalities (cont.)



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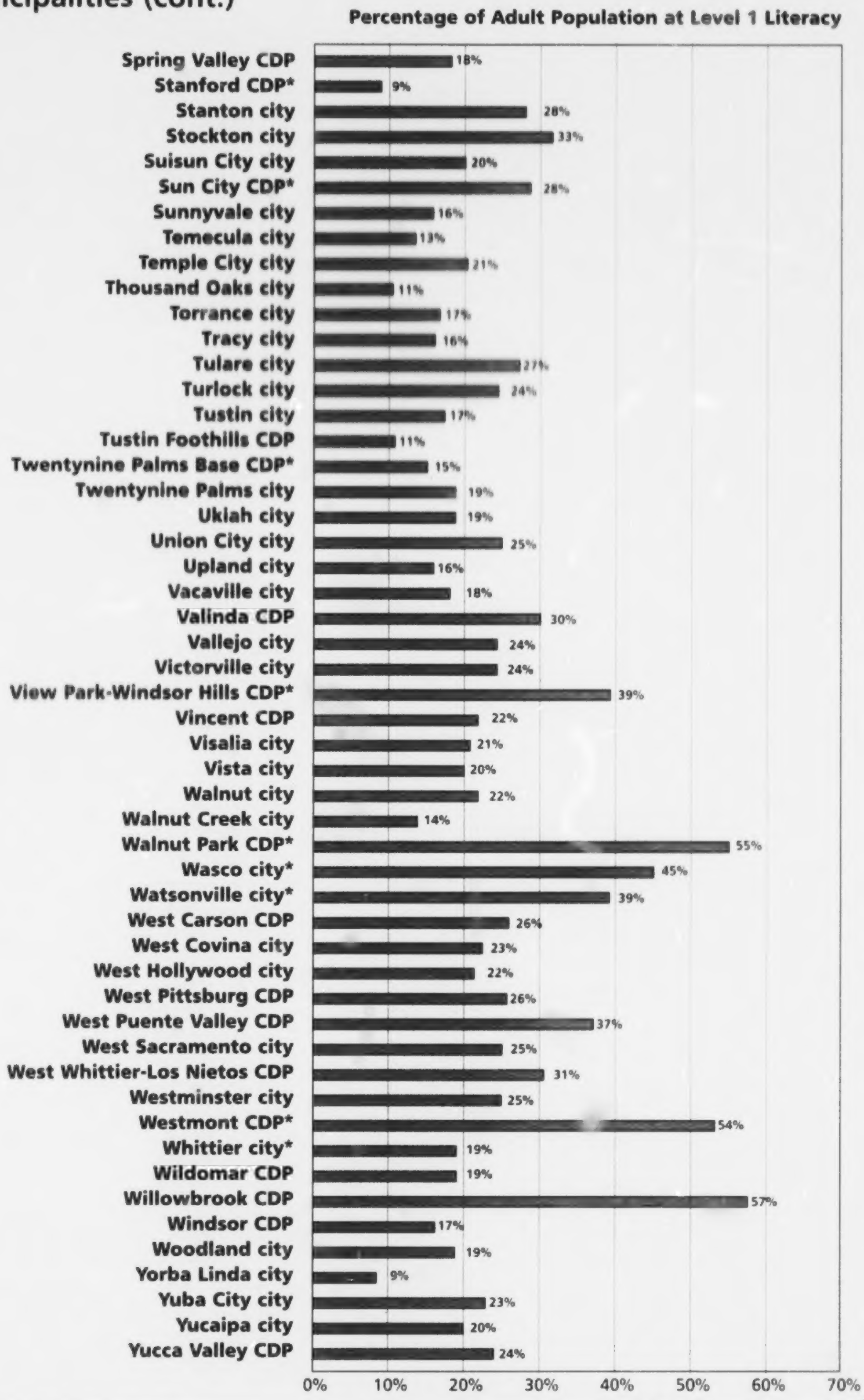
## Municipalities (cont.)



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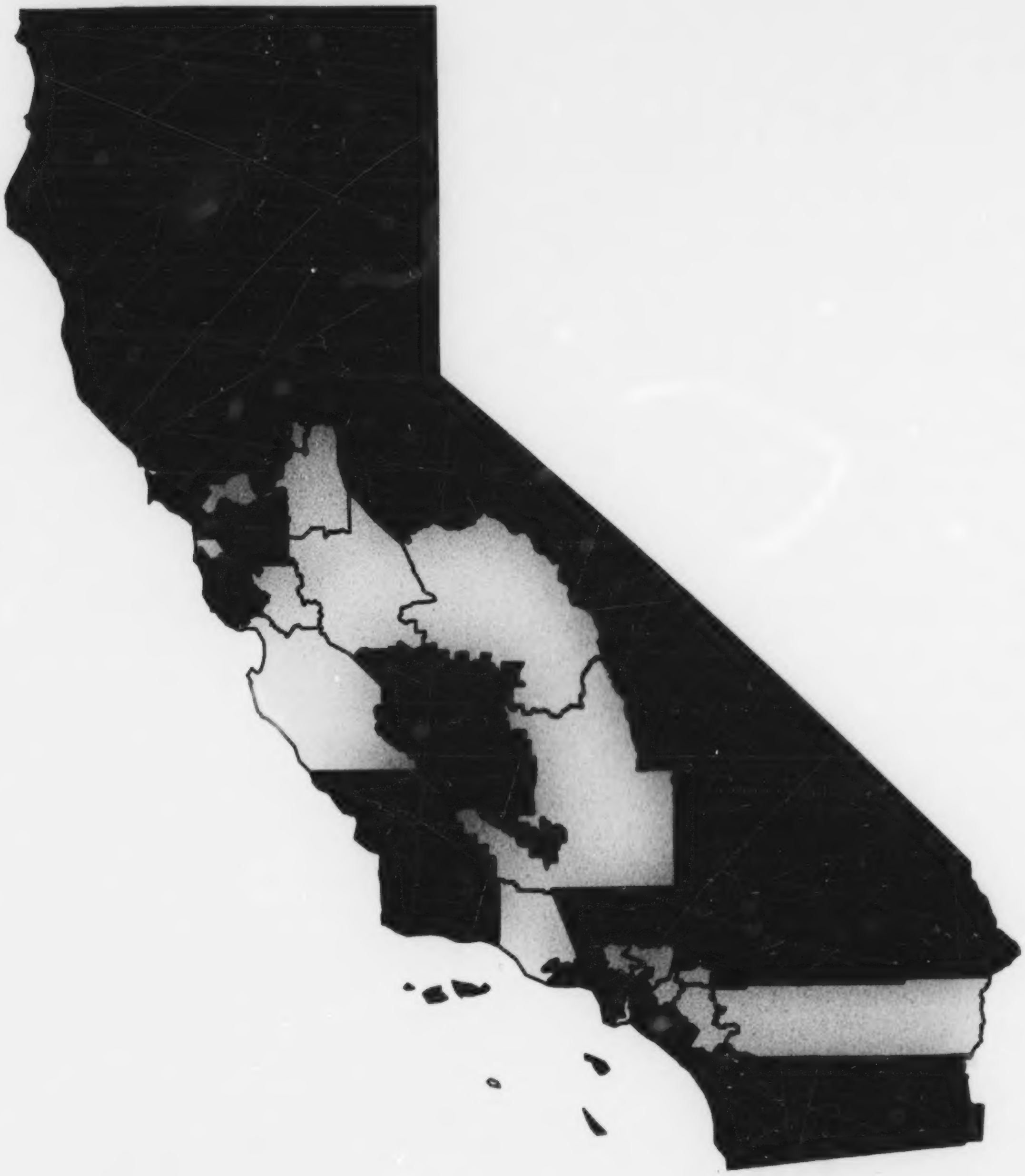
# The State of Literacy in America: California

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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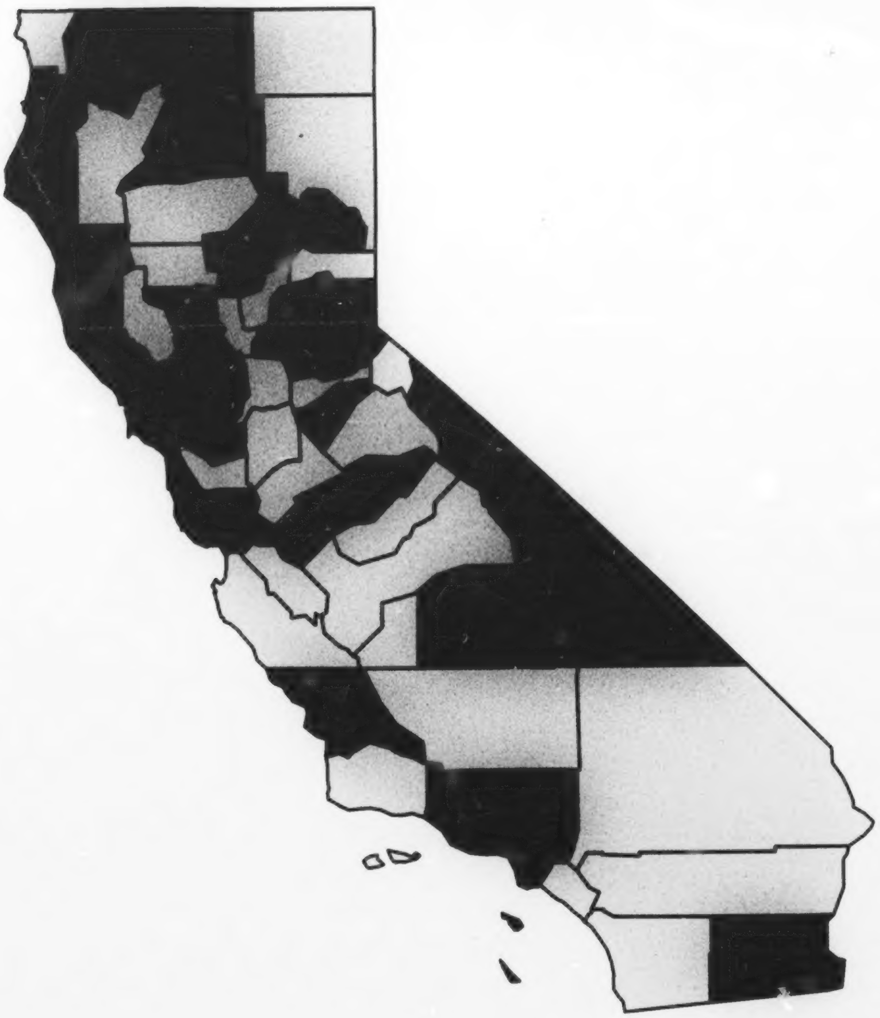
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: California

## Level 1 Adult Literacy Rates, by County



Source: U.S. Department of Education
Division of Adult Education and Literacy

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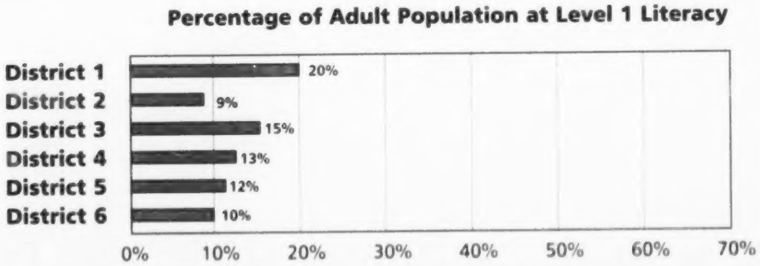
Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

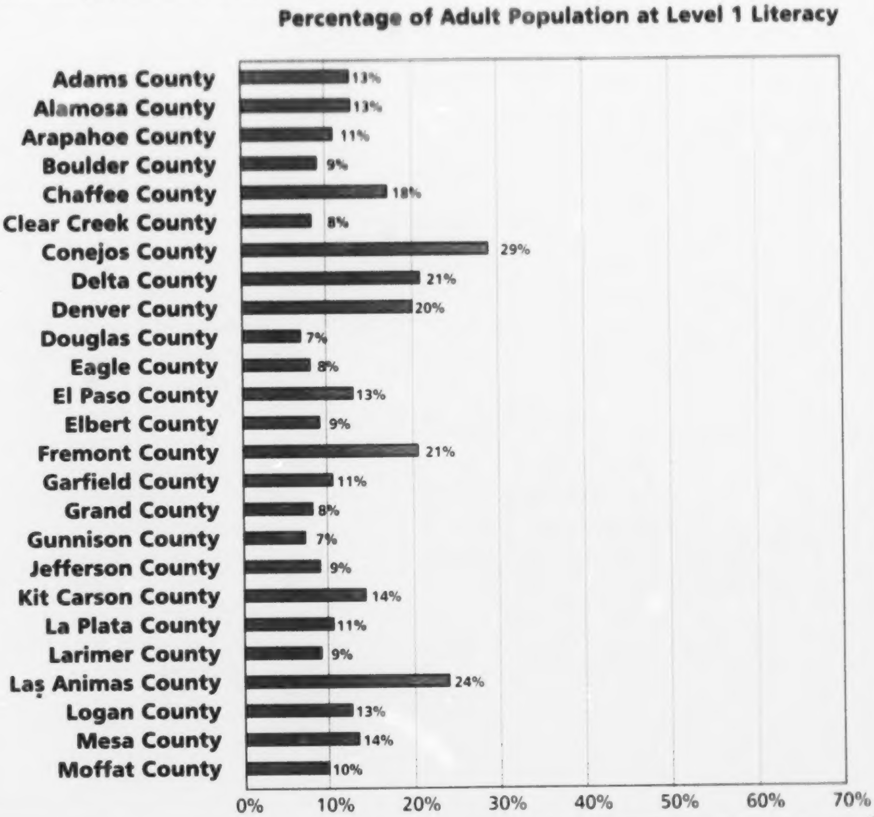
# Colorado

## 13% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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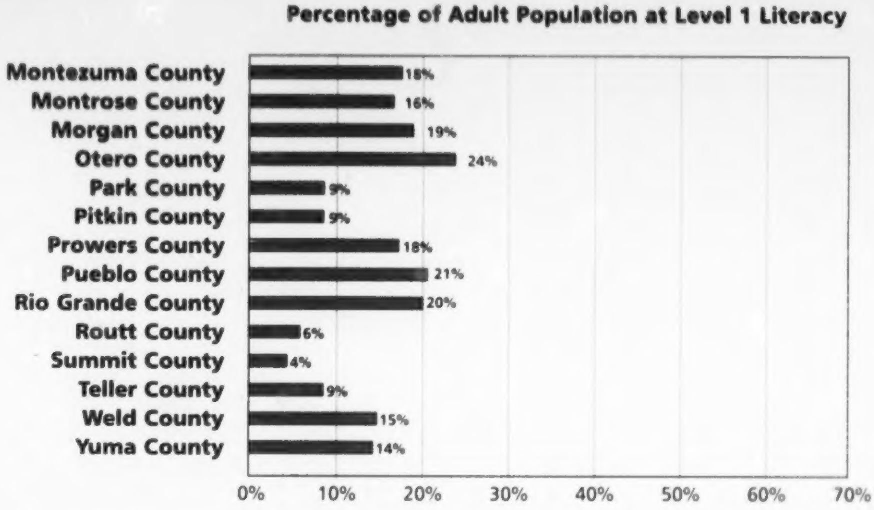
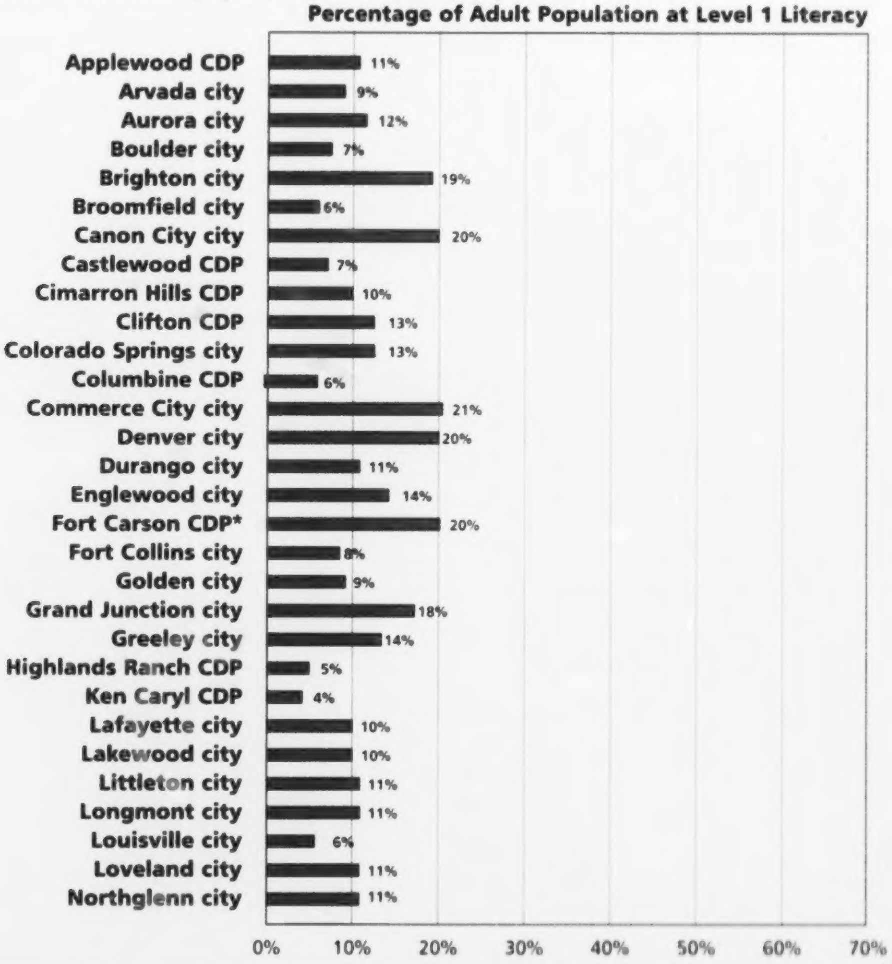
## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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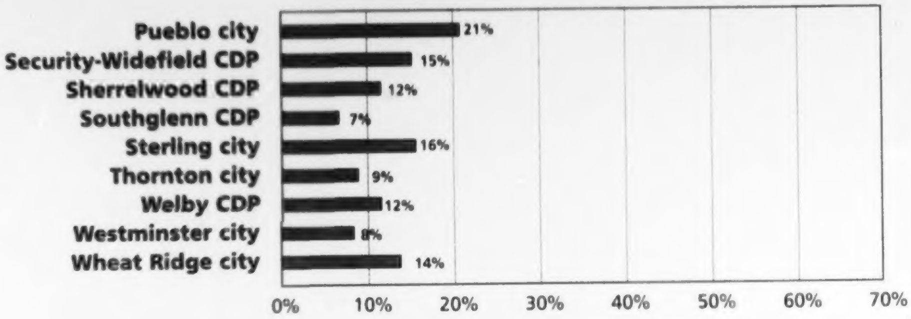
## Municipalities (cont.)

**Percentage of Adult Population at Level 1 Literacy**



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# The State of Literacy in America: Colorado

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population
with Level 1 Literacy skills

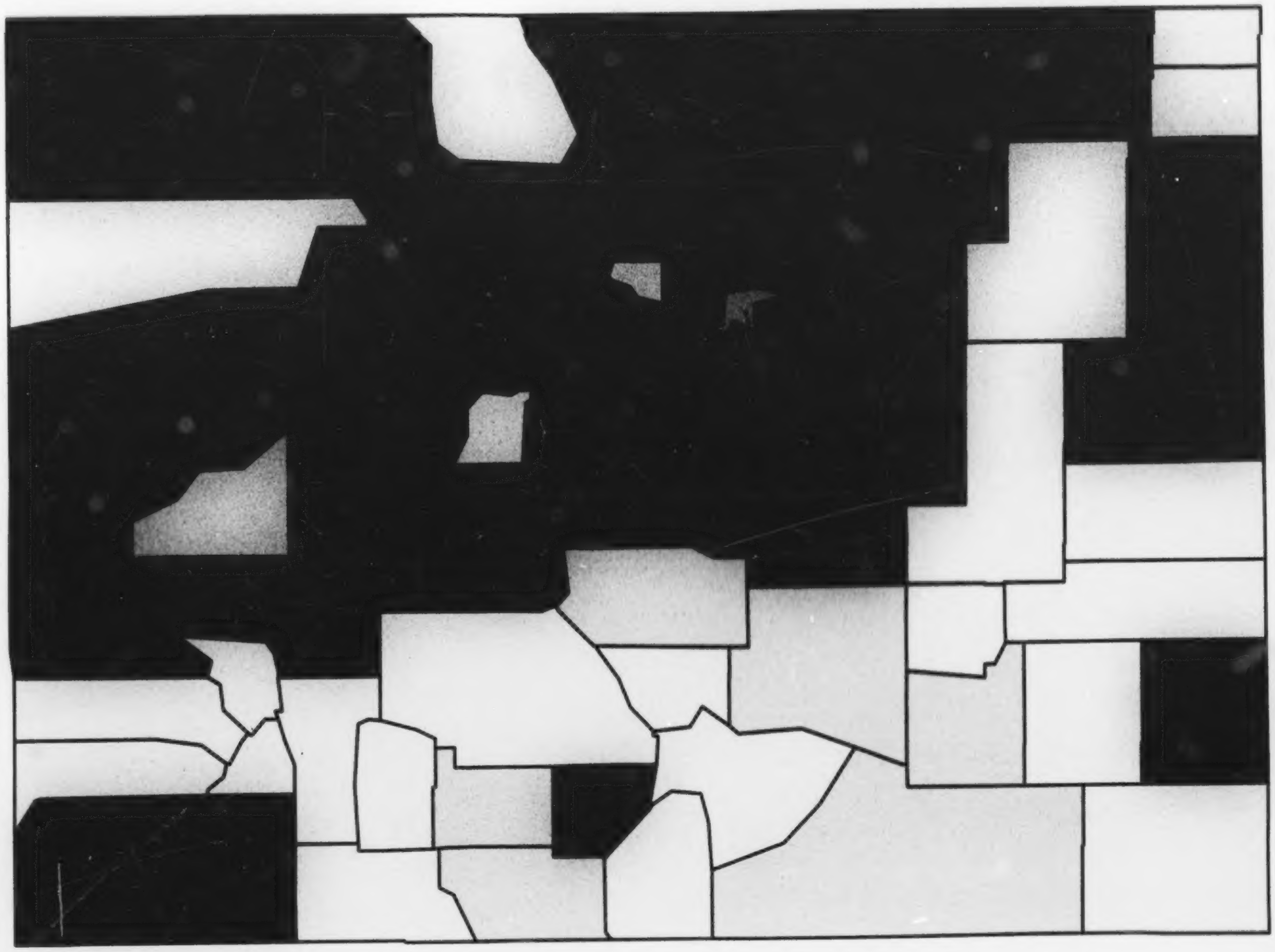
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Colorado

## Level 1 Adult Literacy Rates, by County



**Percentage of adult population with Level 1 Literacy skills**

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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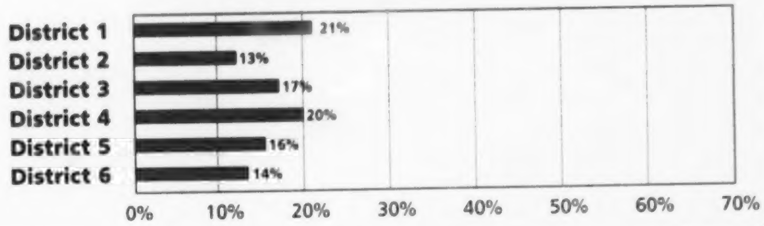
# Connecticut

## 16% of adult population is at Level 1 Literacy

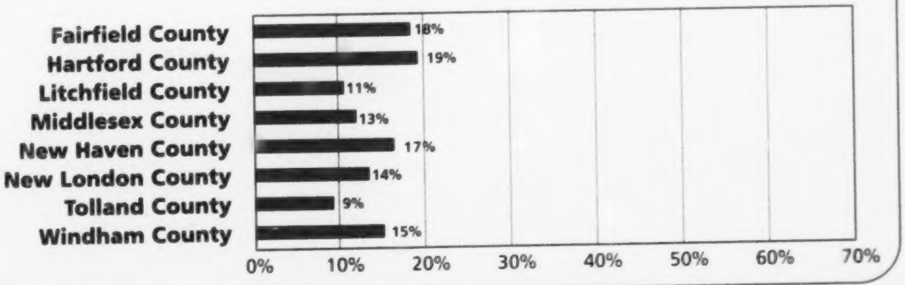
### Congressional Districts

Percentage of Adult Population at Level 1 Literacy



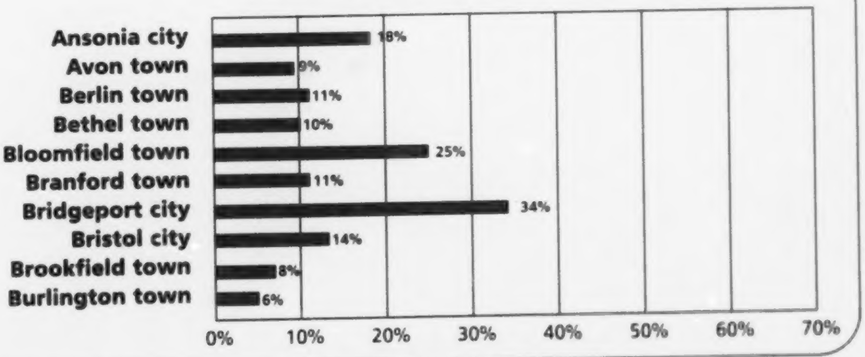
### Counties (with adult populations of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



### Municipalities (with adult populations of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



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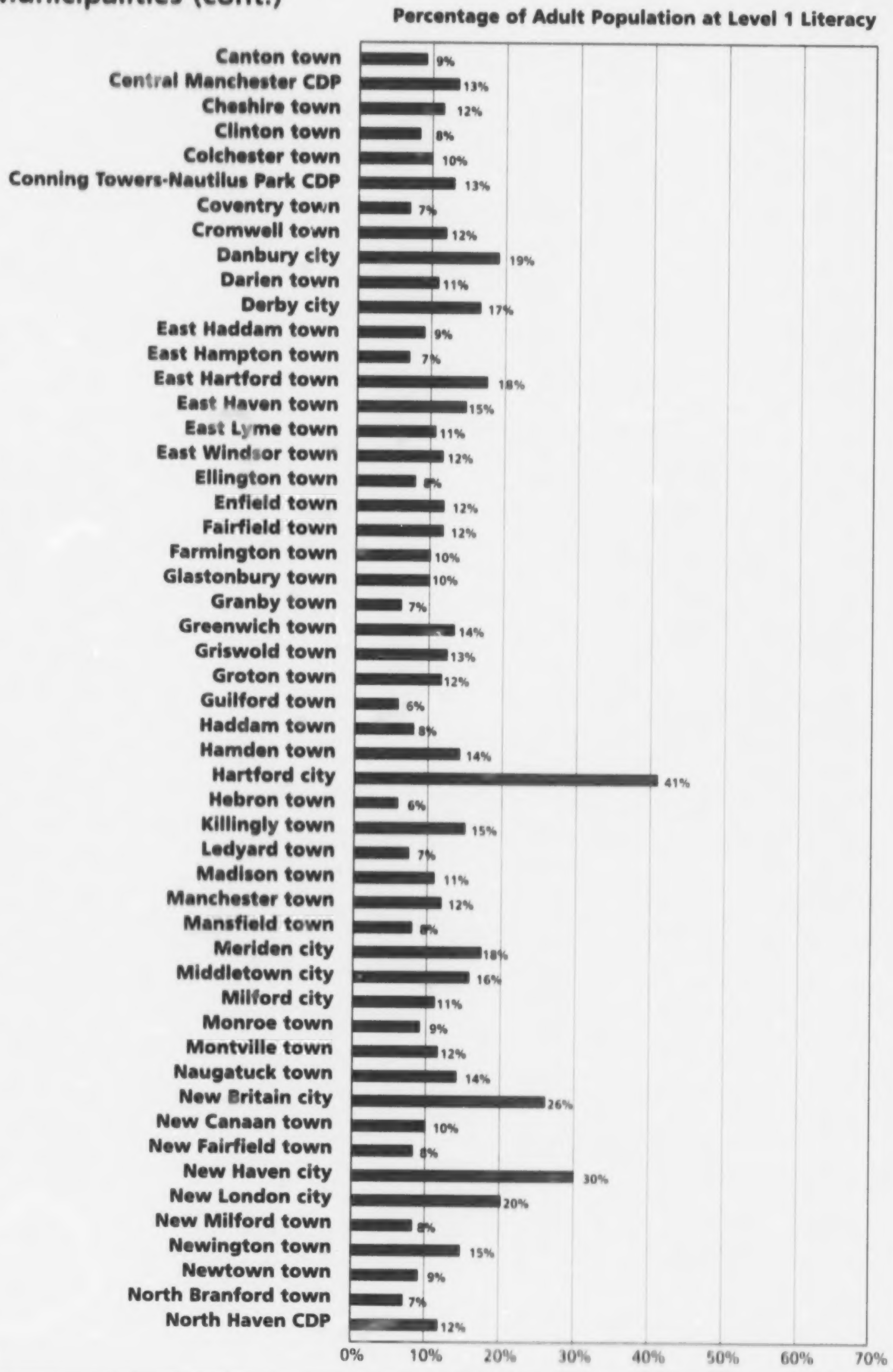
## Municipalities (cont.)



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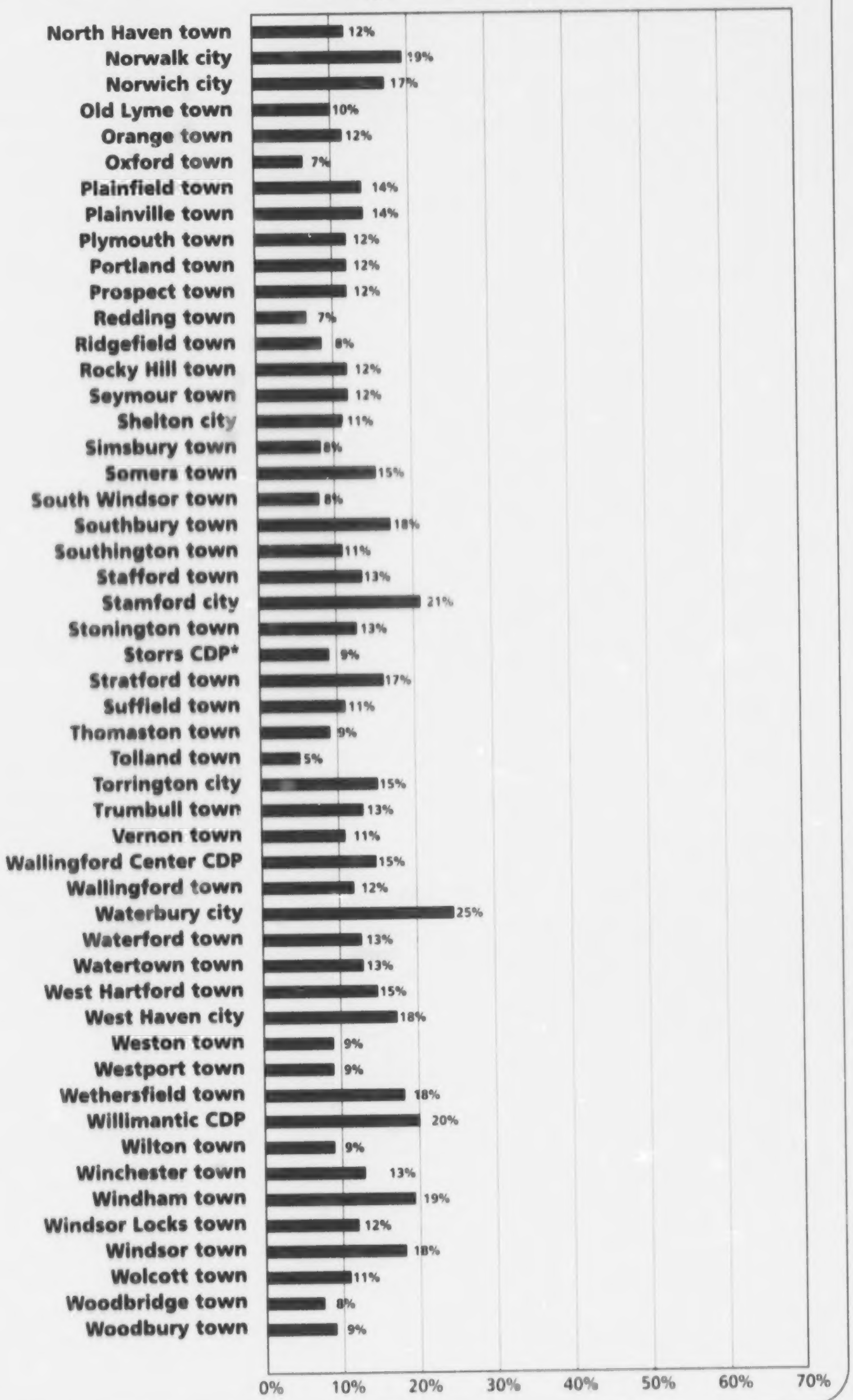
## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy

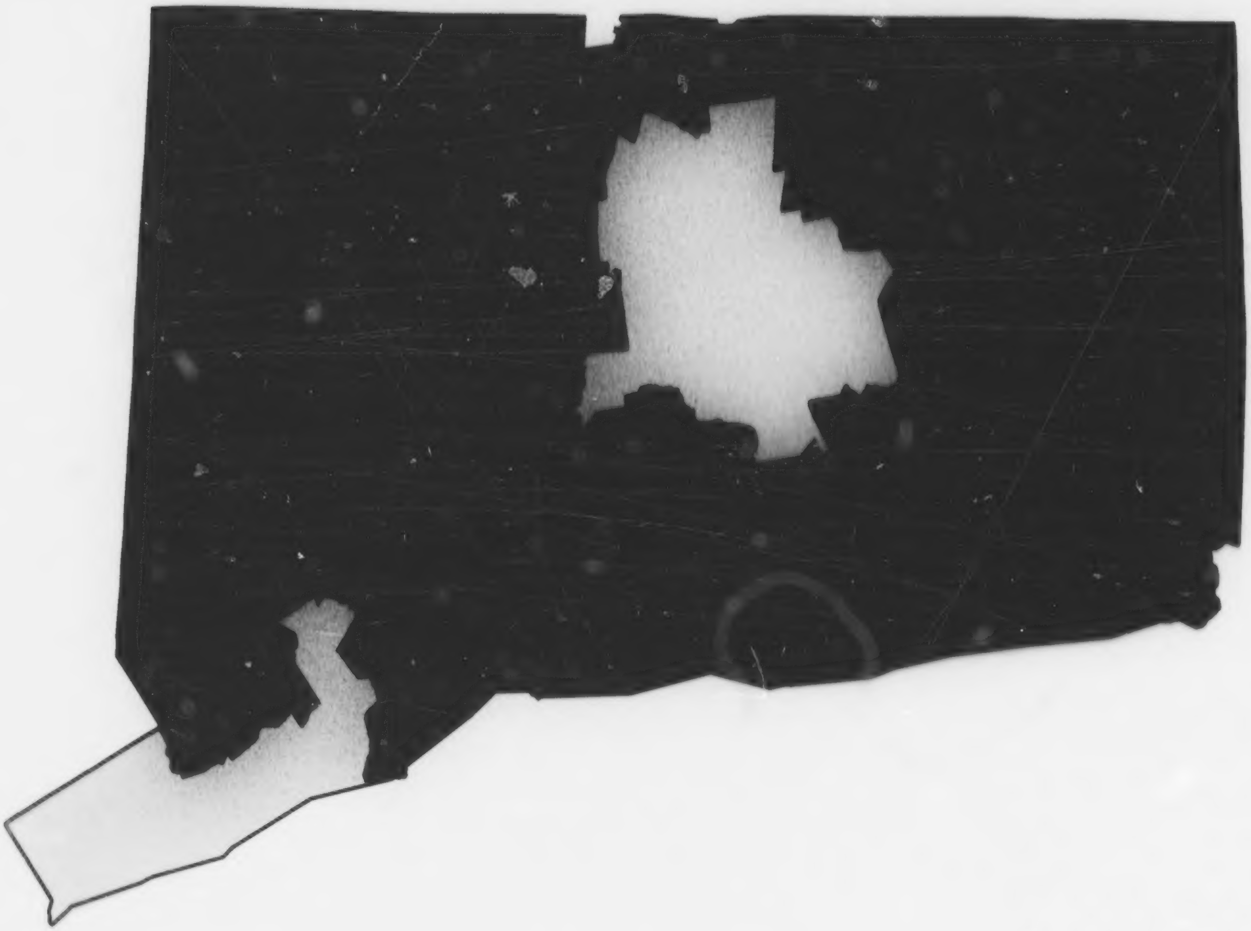


* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Connecticut

## Level 1 Adult Literacy Rates, by Congressional District


Percentage of adult population with Level 1 Literacy skills
■ 30% or greater (1)
□ 20% to 30% (1)
■ 15% to 20% (1)
■ 10% to 15% (4)
■ 10% or less (6)
□ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

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Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Connecticut

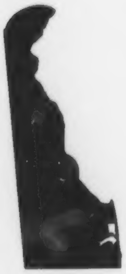
## Level 1 Adult Literacy Rates, by County

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

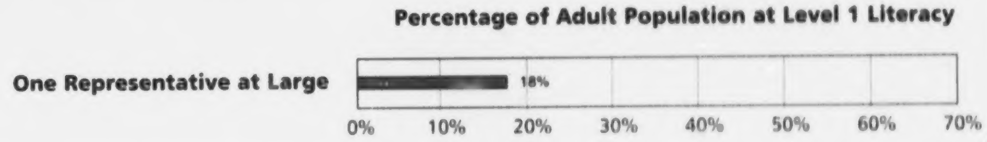
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).



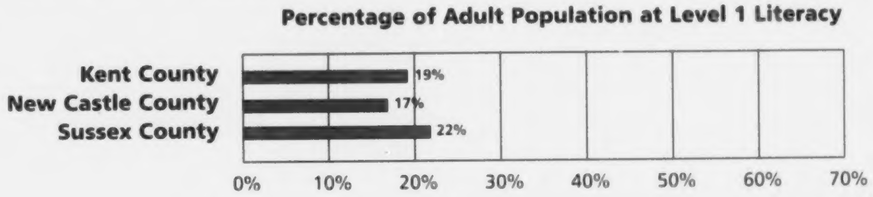
# Delaware

## 18% of adult population is at Level 1 Literacy

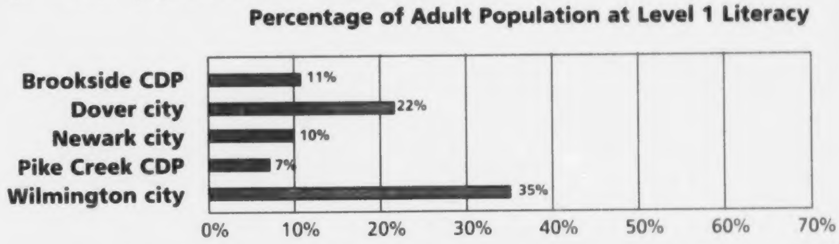
### Congressional Districts



### Counties (with adult populations of at least 5,000)



### Municipalities (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Delaware

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

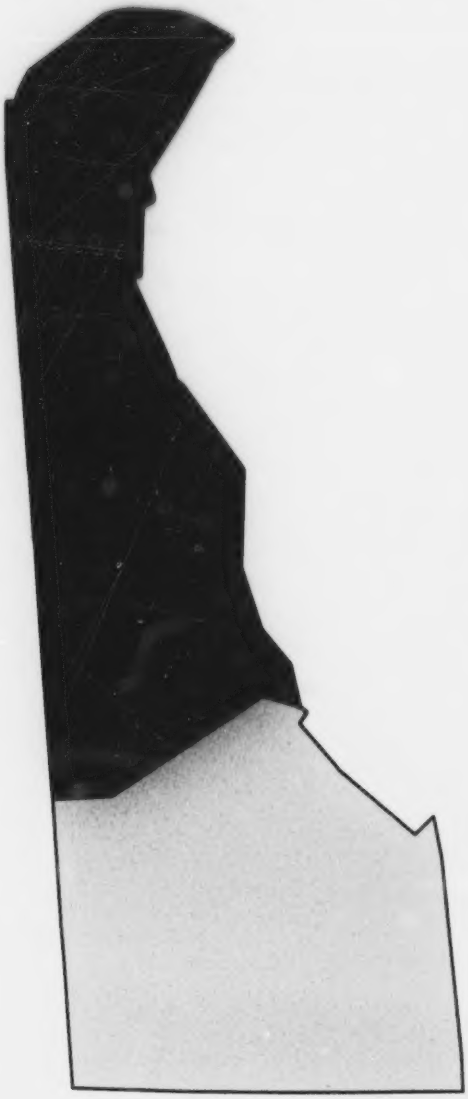
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ▫ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Delaware

## Level 1 Adult Literacy Rates, by County

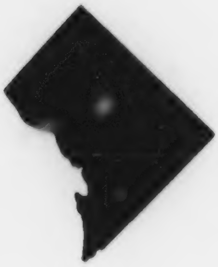


Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ▨ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| ☐ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

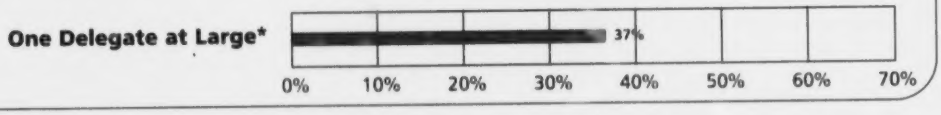


# District of Columbia*

## 37% of adult population is at Level 1 Literacy

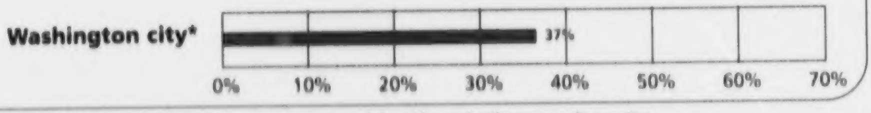
### Congressional District

**Percentage of Adult Population at Level 1 Literacy**



### Municipalities (with adult populations of at least 5,000)

**Percentage of Adult Population at Level 1 Literacy**



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Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Washington D.C.

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ▨ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

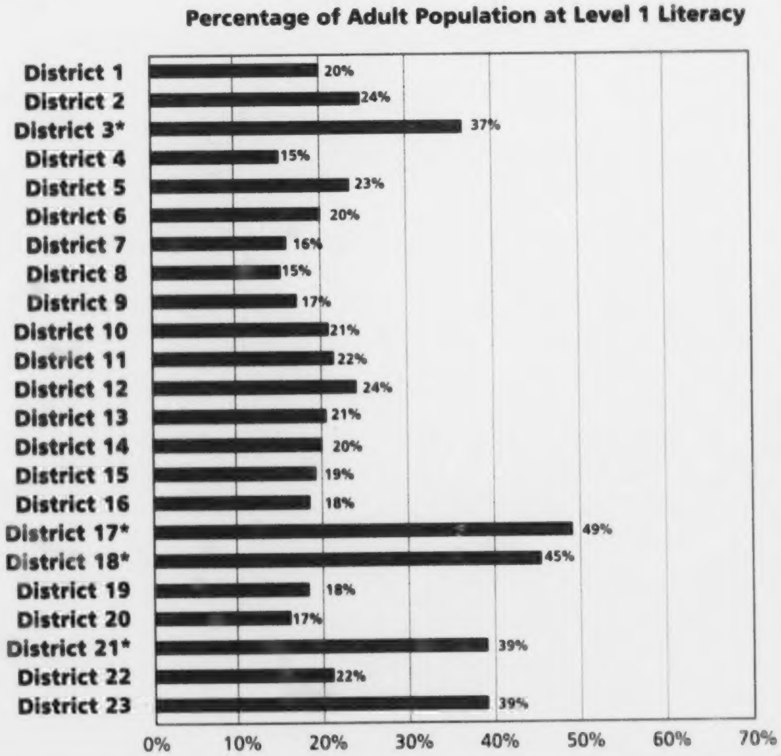
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

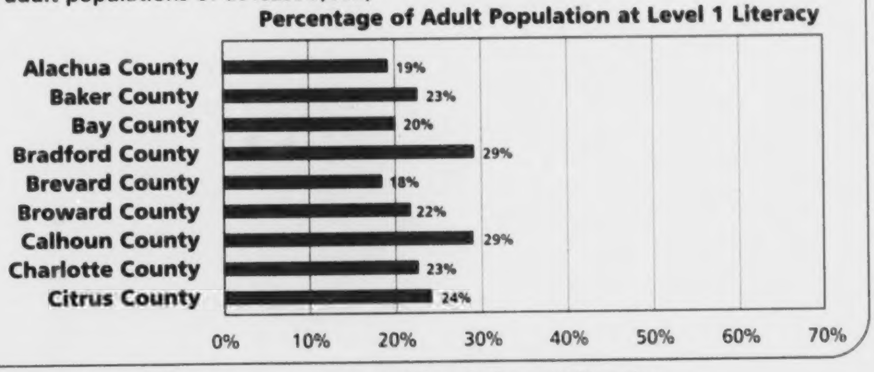
# Florida

## 25% of adult population is at Level 1 Literacy

### Congressional Districts



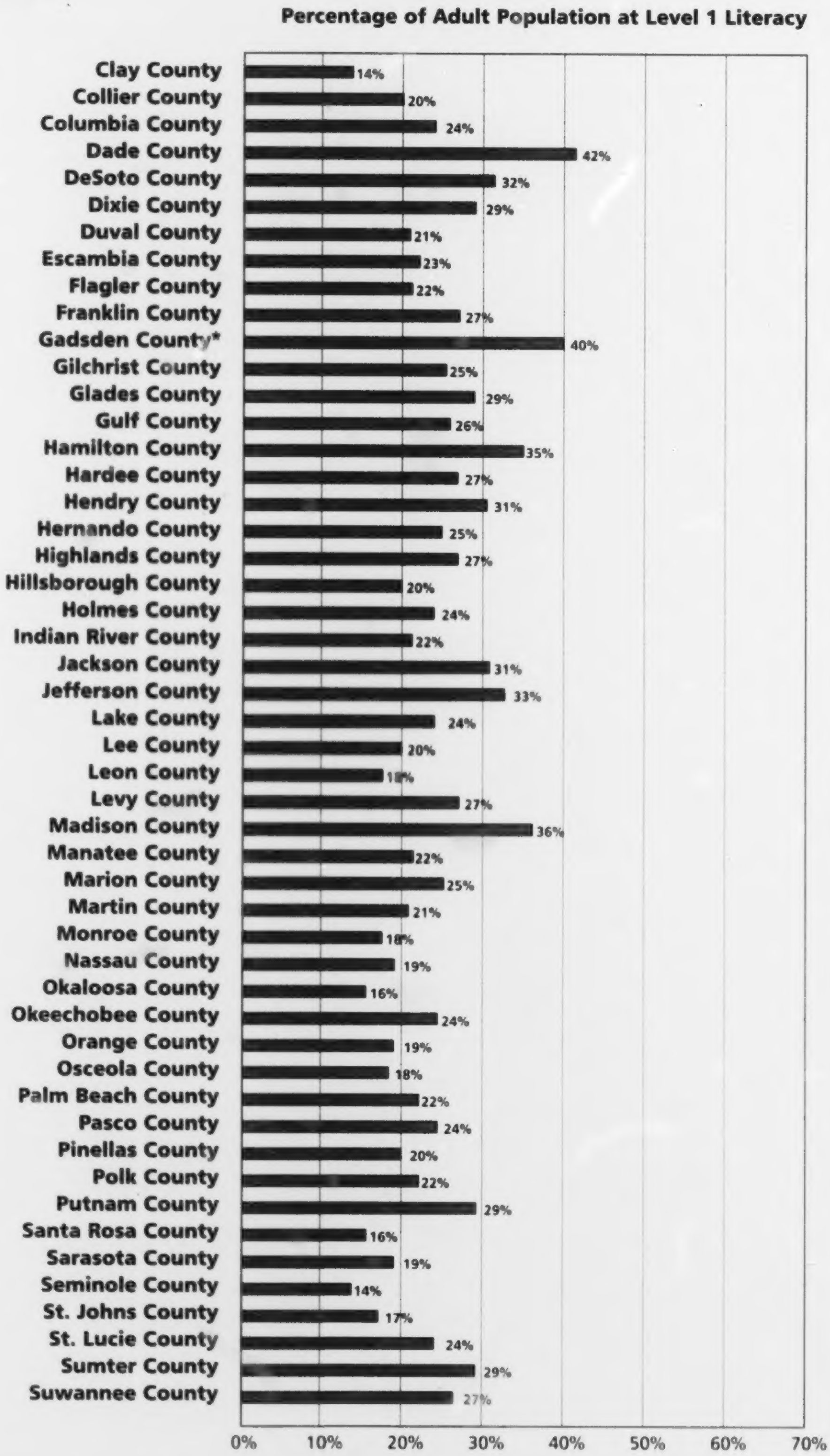
### Counties (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



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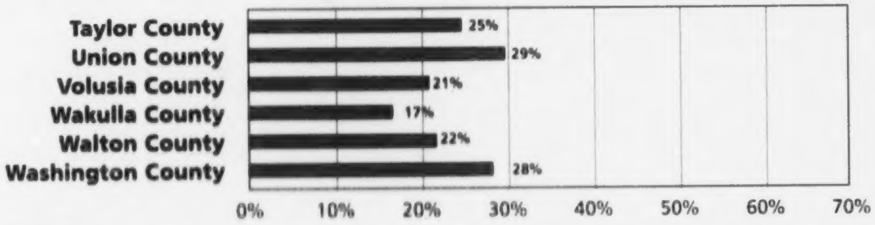
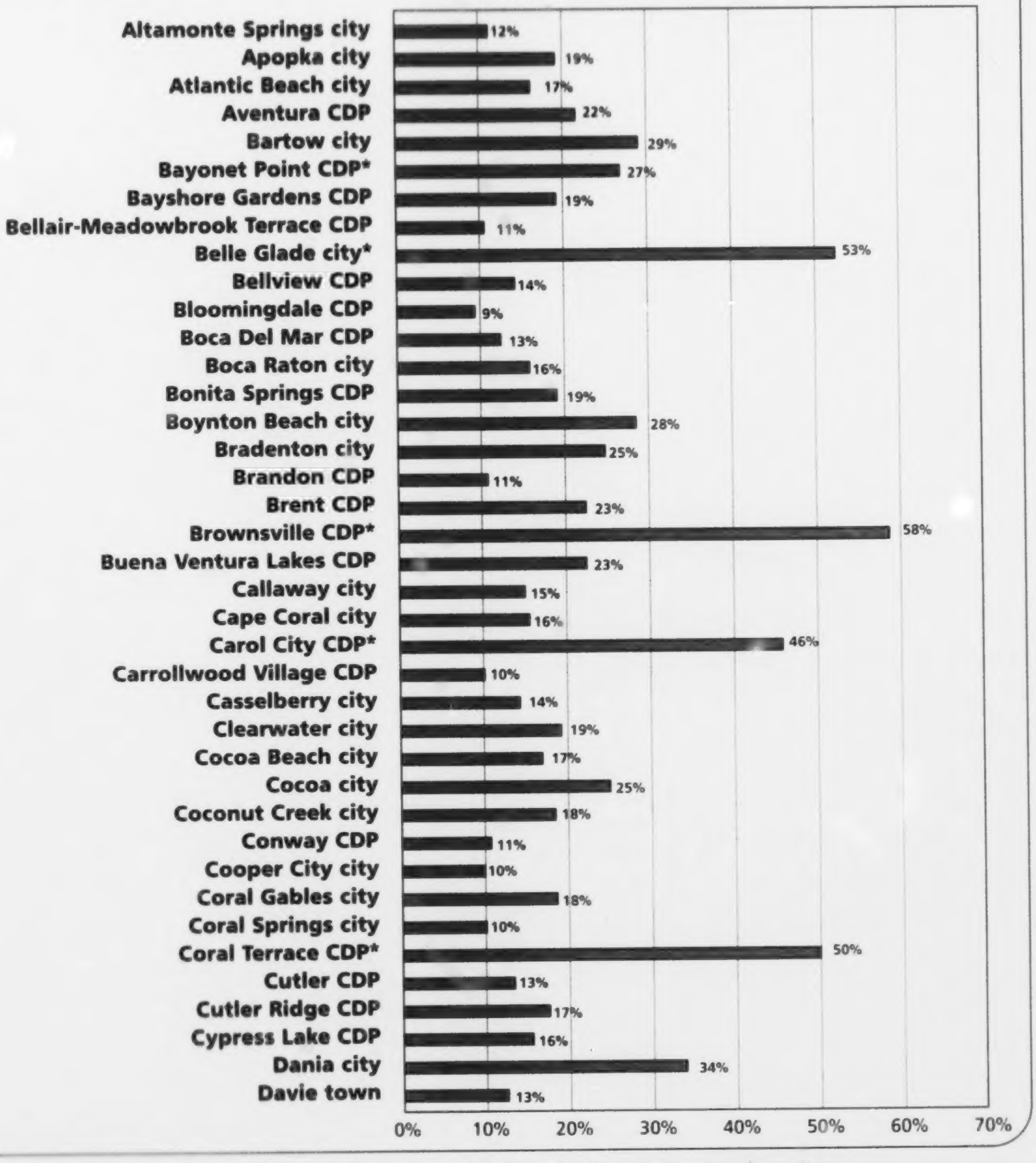
## Counties (cont.)


Percentage of Adult Population at Level 1 Literacy

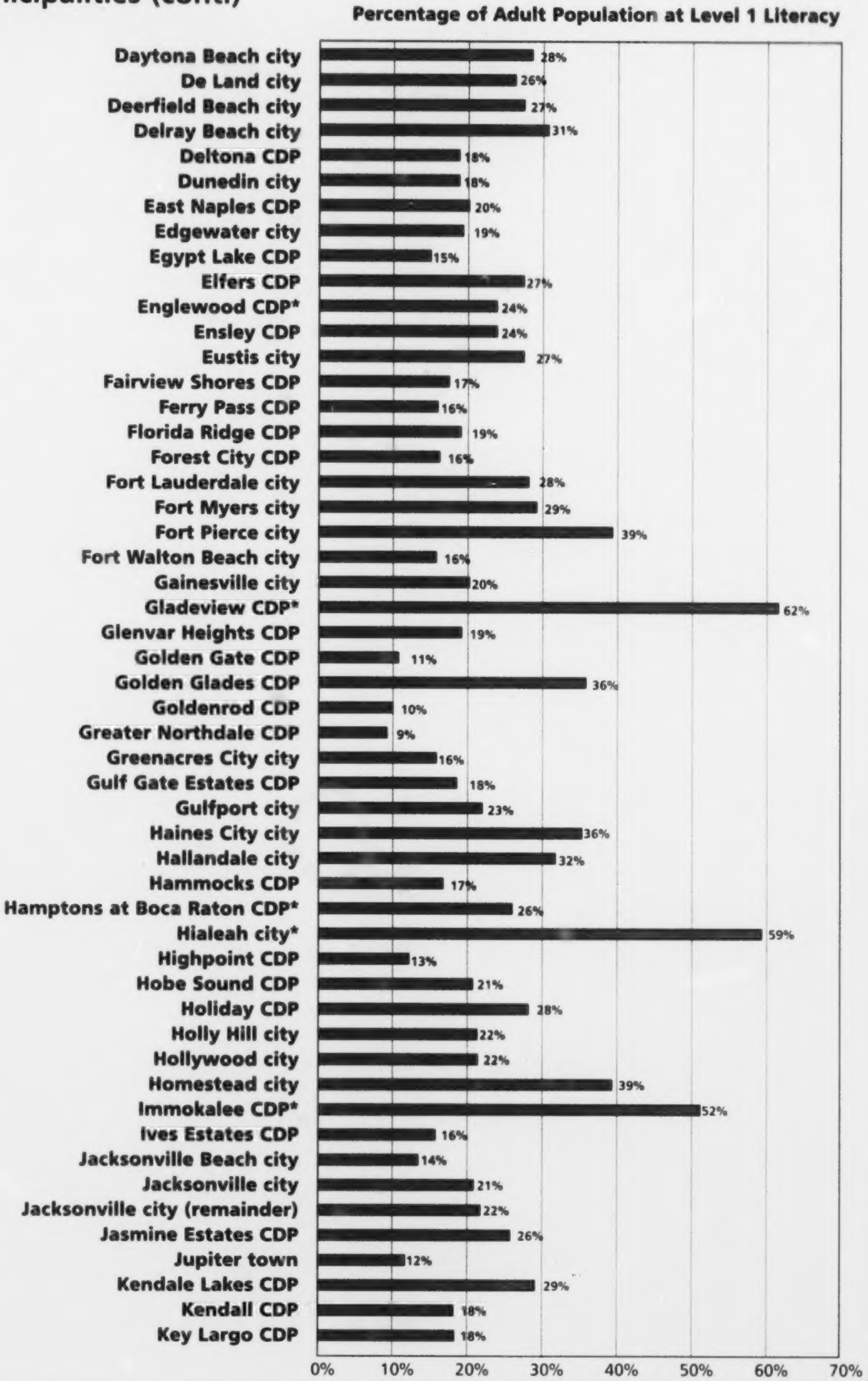
## Municipalities (with adult populations of at least 5,000)


Percentage of Adult Population at Level 1 Literacy

* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



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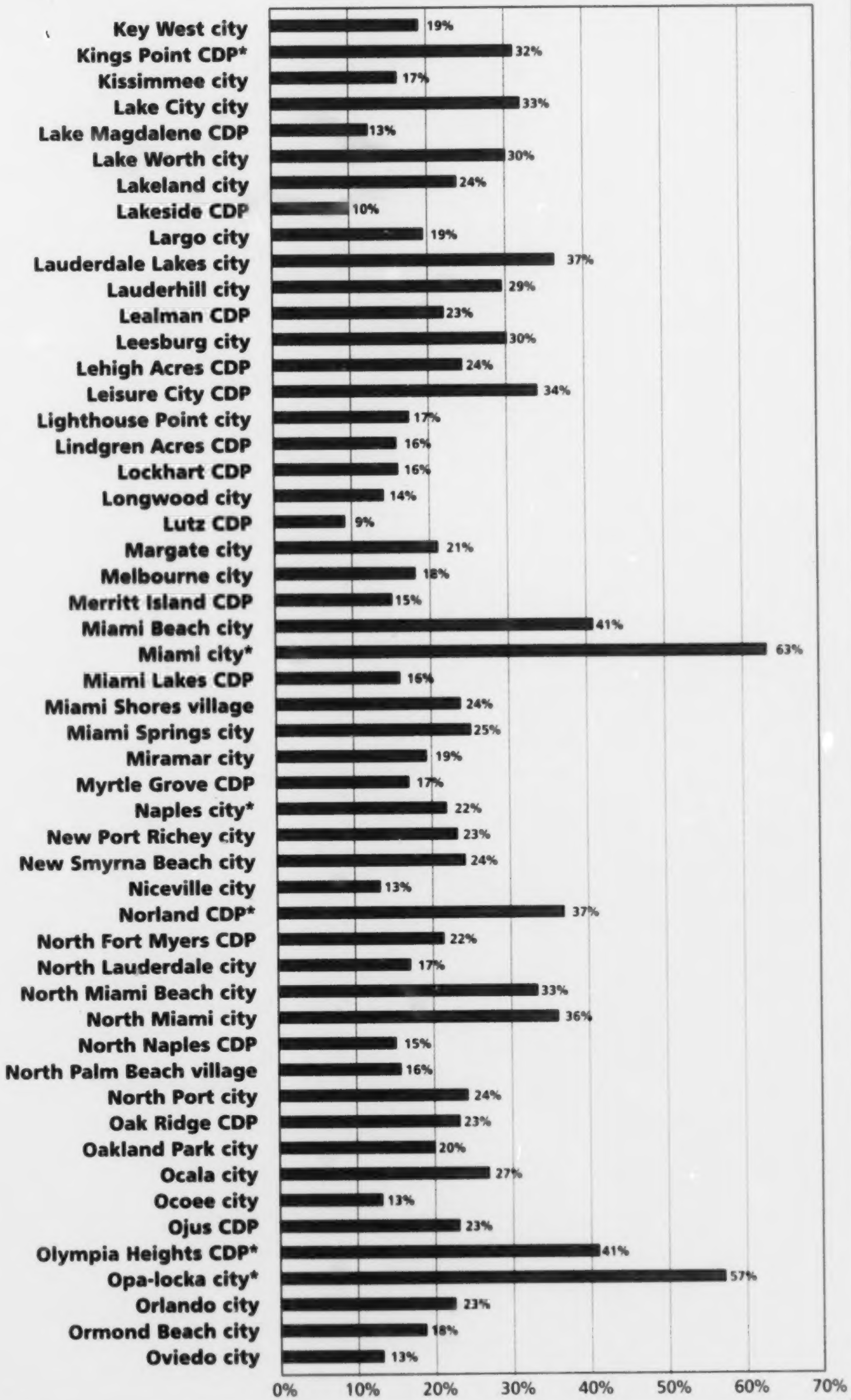
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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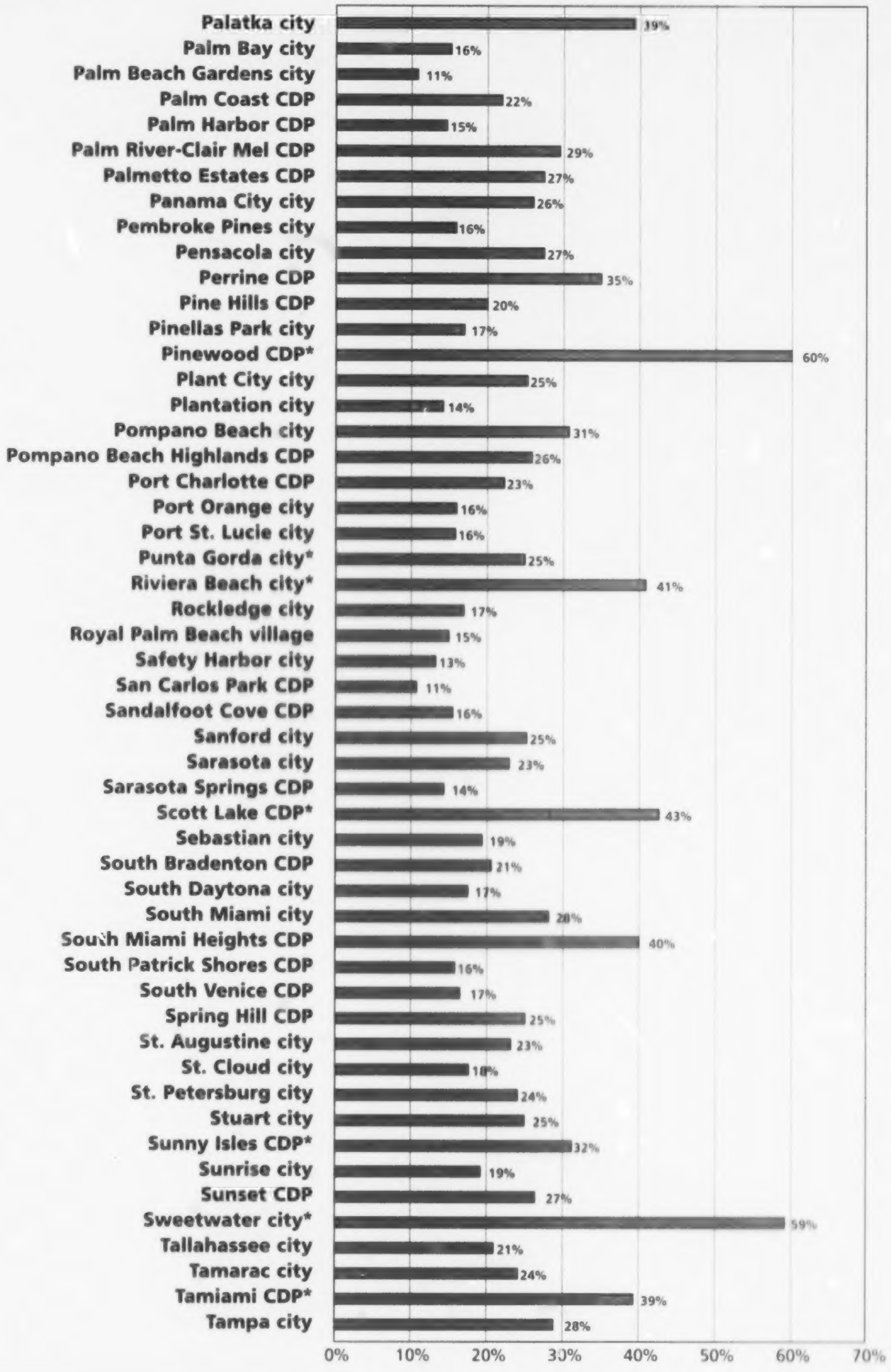
## Municipalities (cont.)

**Percentage of Adult Population at Level 1 Literacy**



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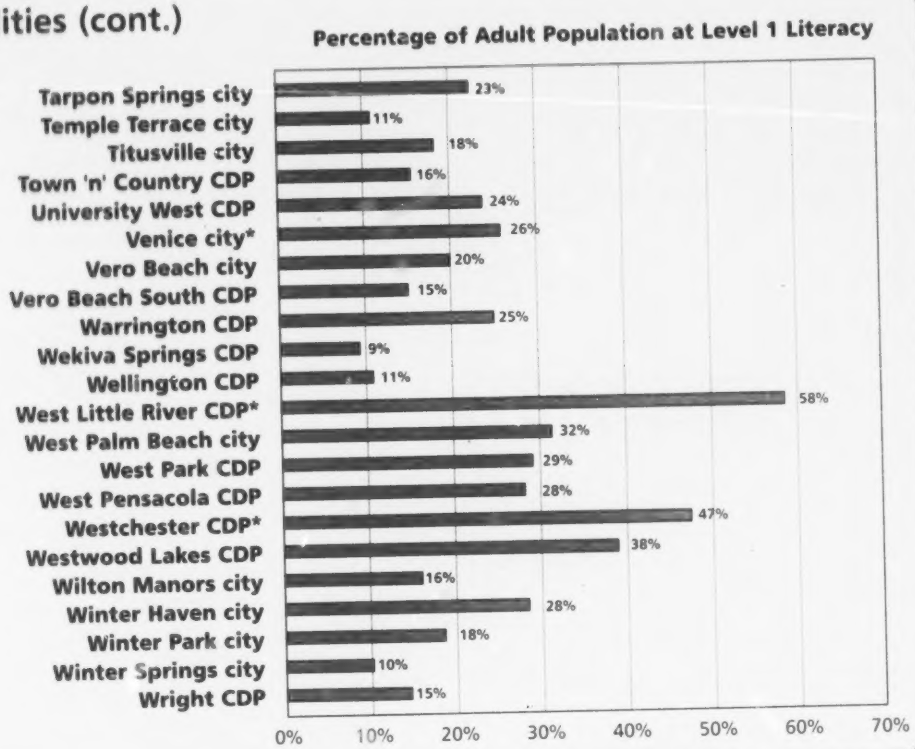
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov)

## Municipalities (cont.)



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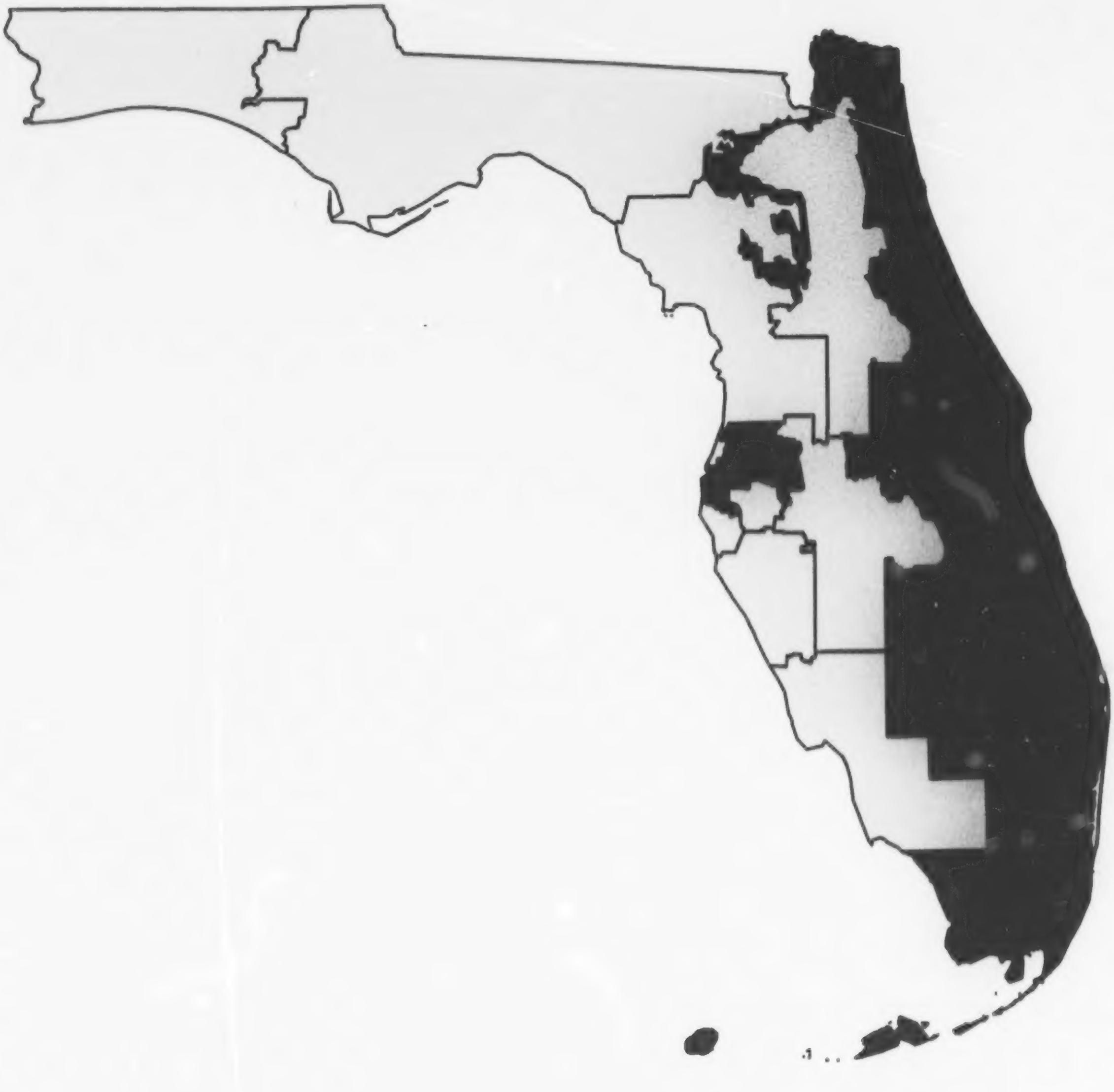
# The State of Literacy in America: Florida

## Level 1 Adult Literacy Rates, by Congressional District



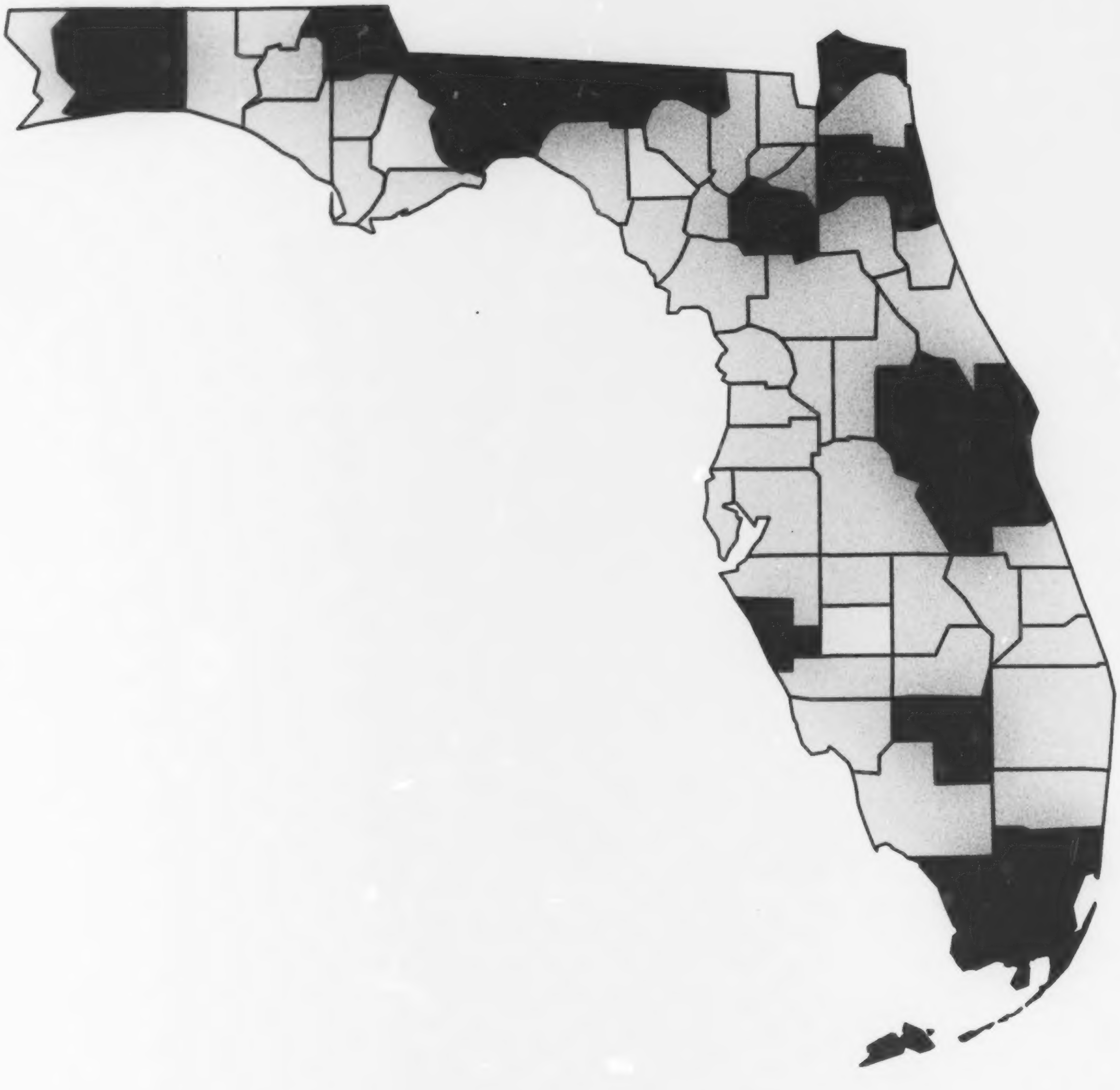
Percentage of adult population with Level 1 Literacy skills
■ 30% or greater (1)
□ 20% to 30% (1)
■ 15% to 20% (1)
■ 10% to 15% (4)
■ 10% or less (6)
□ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Florida

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

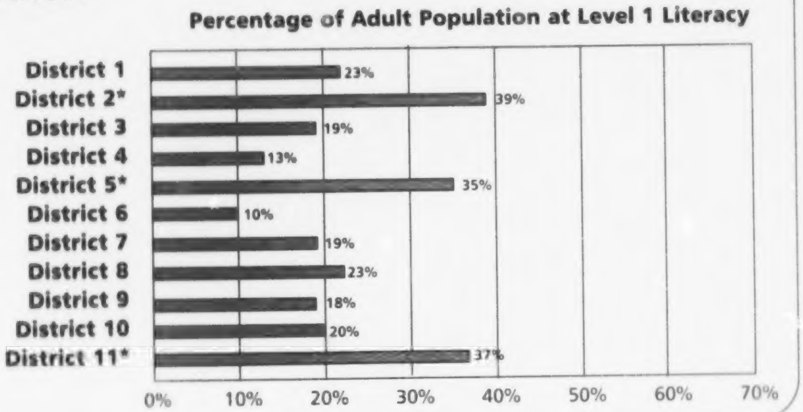
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

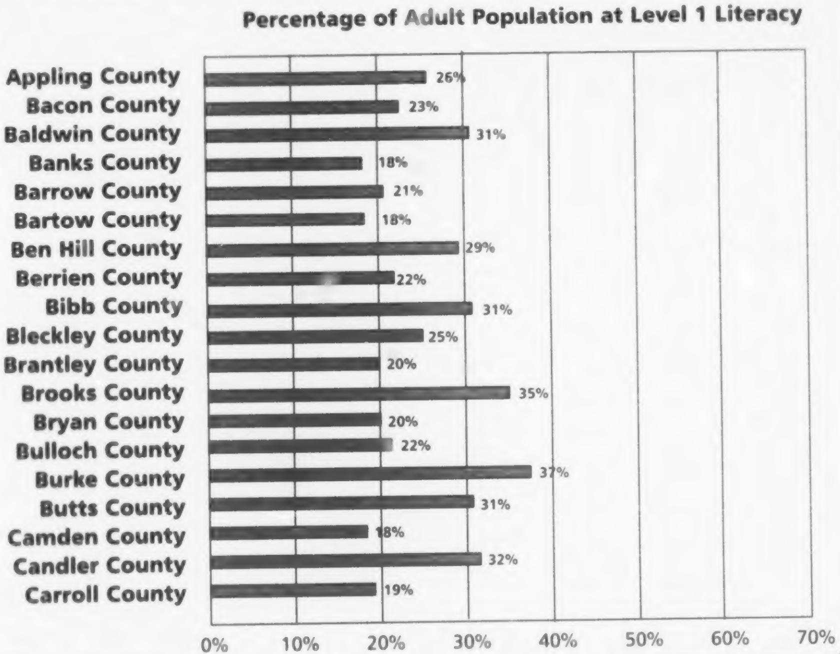
# Georgia

## 23% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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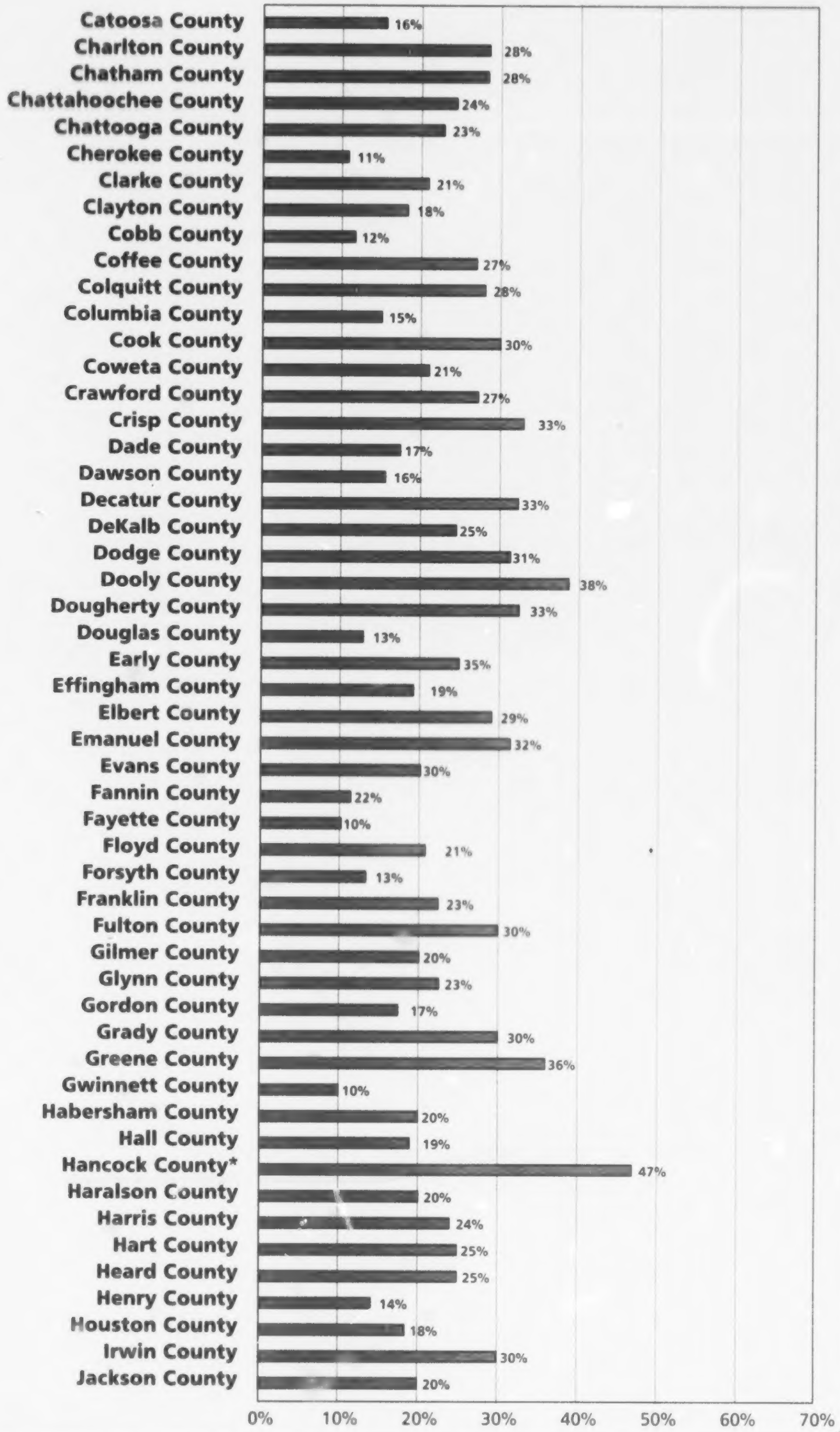
## Counties (cont.)

Percentage of Adult Population at Level 1 Literacy



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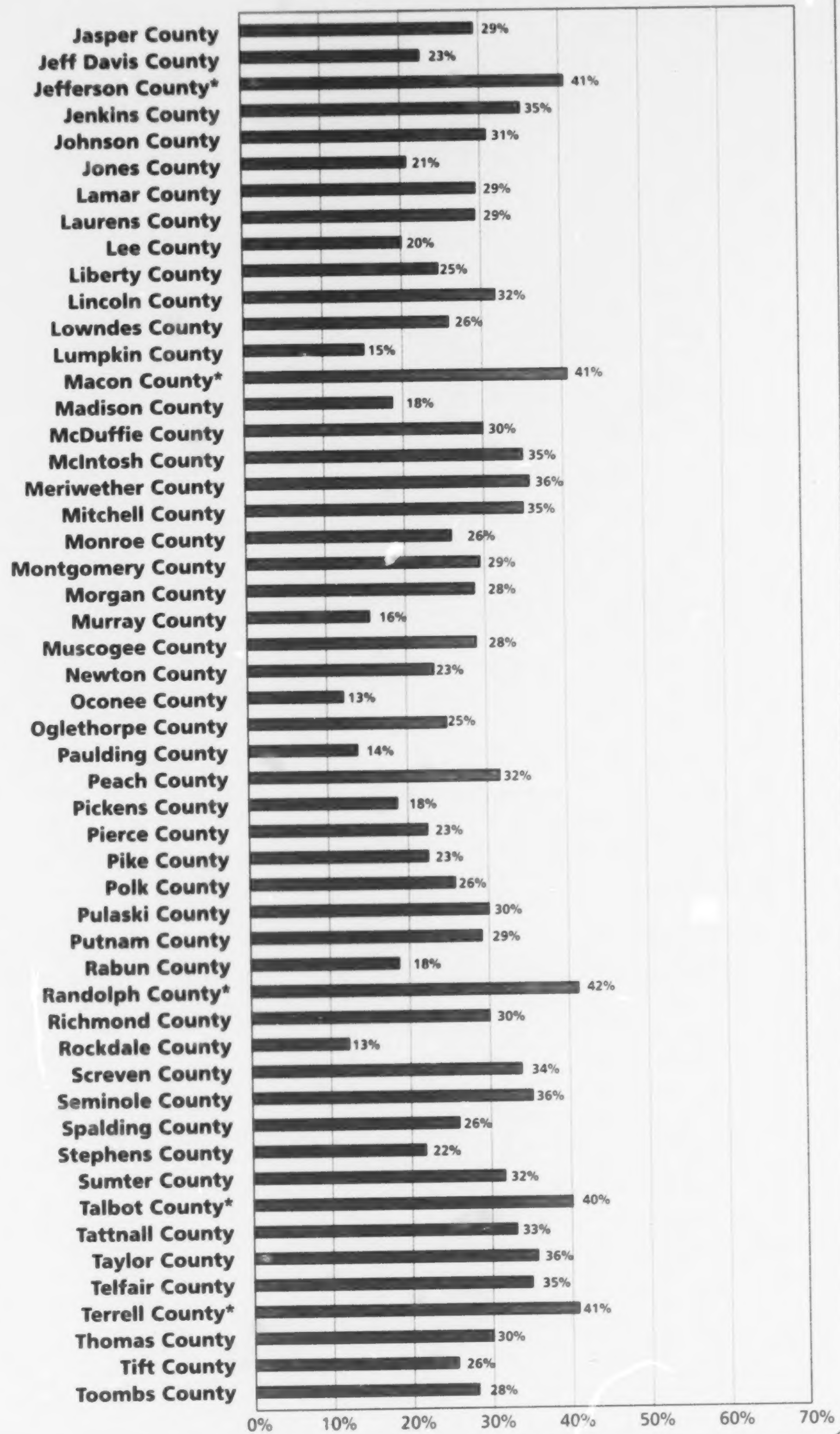
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)

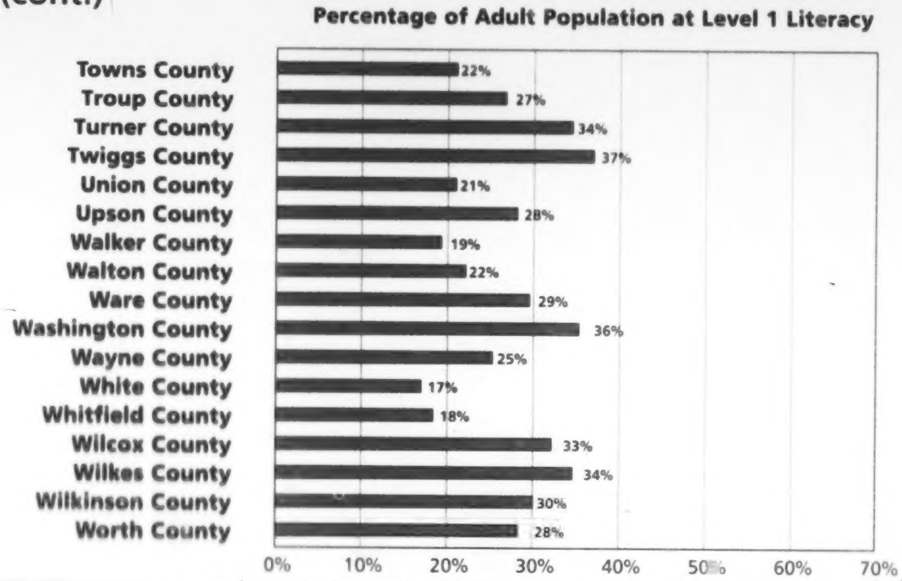


**Percentage of Adult Population at Level 1 Literacy**

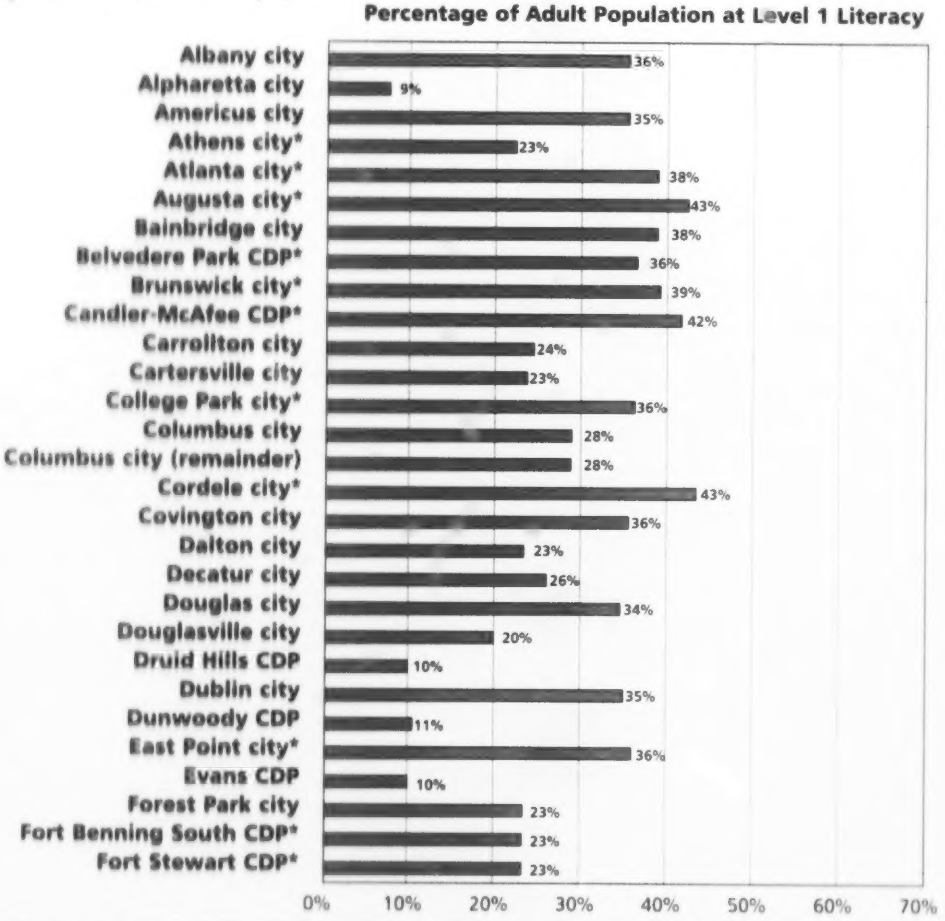
* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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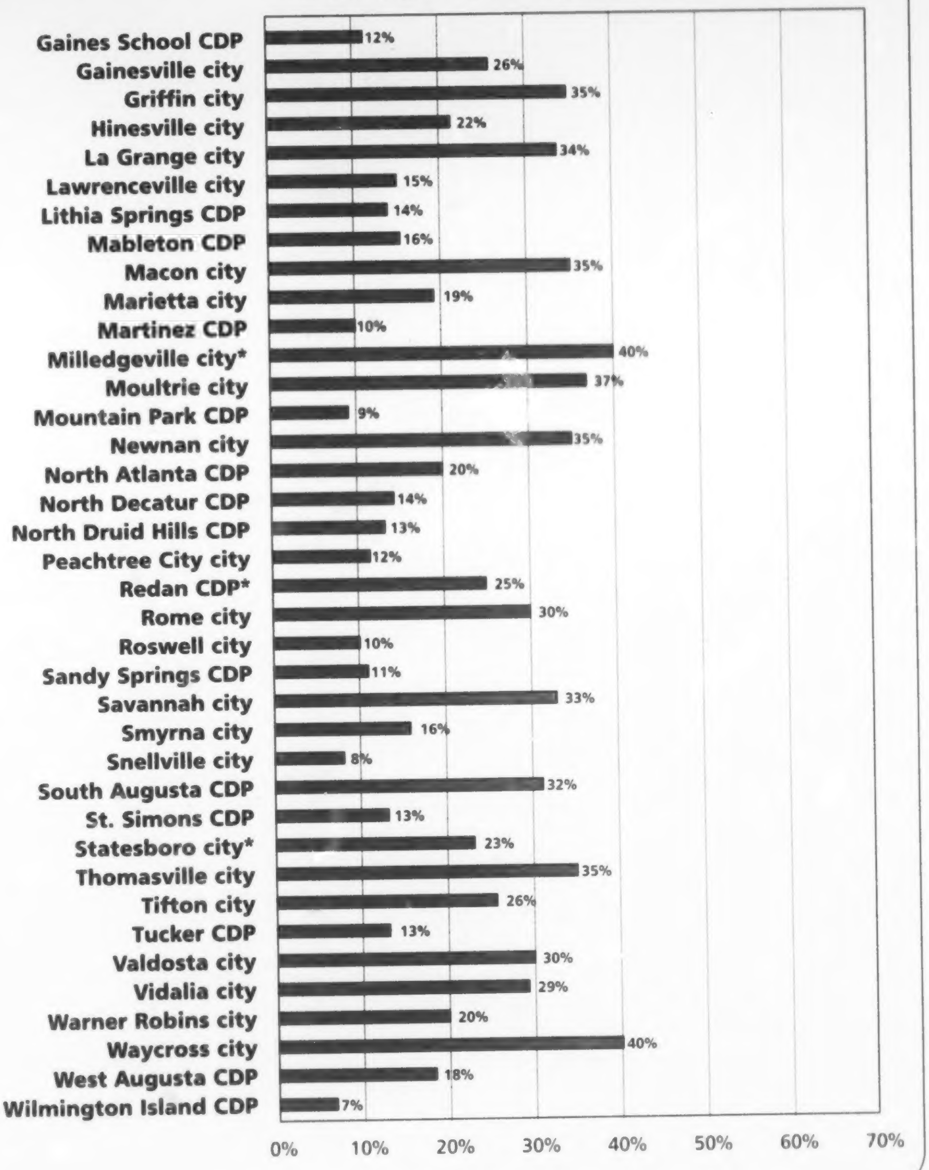
## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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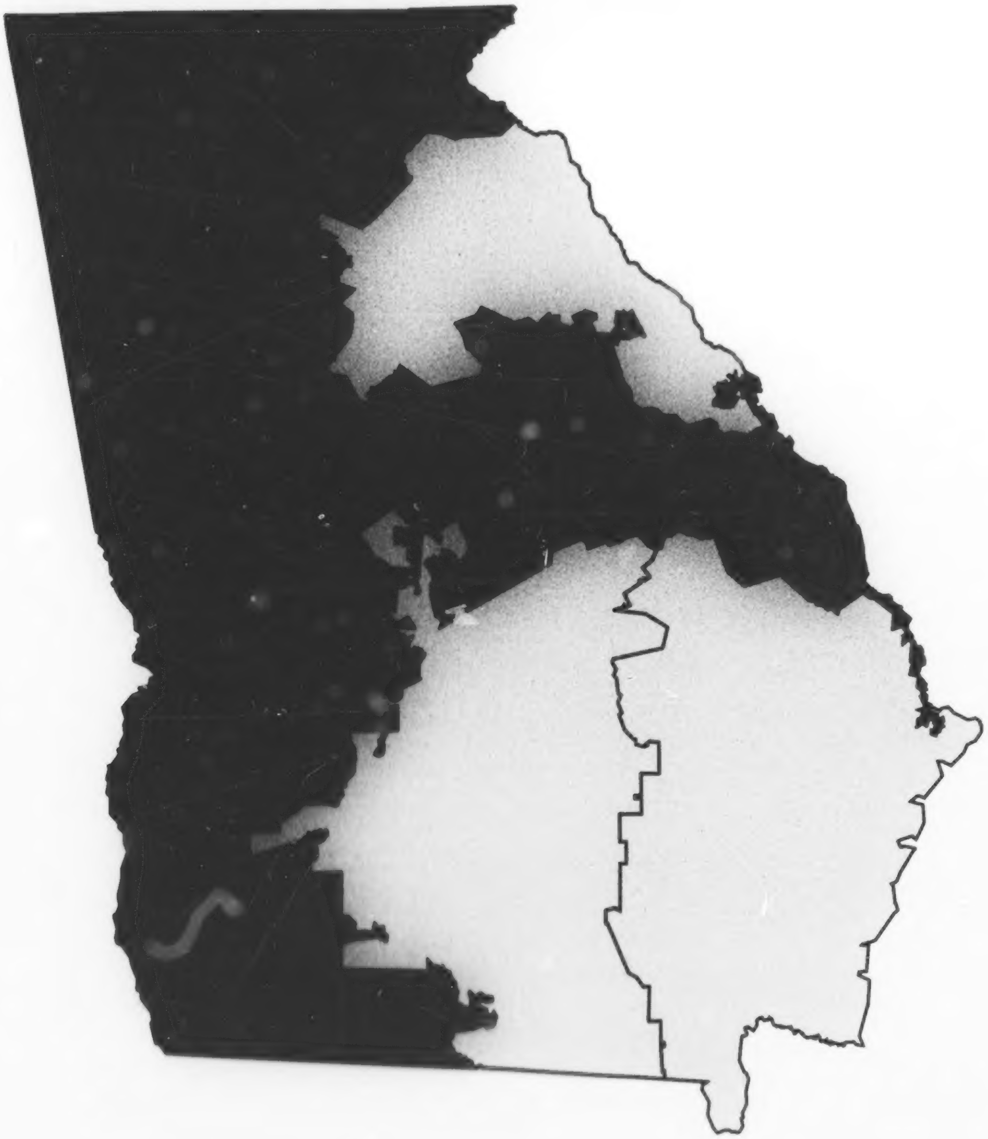
# The State of Literacy in America: Georgia

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

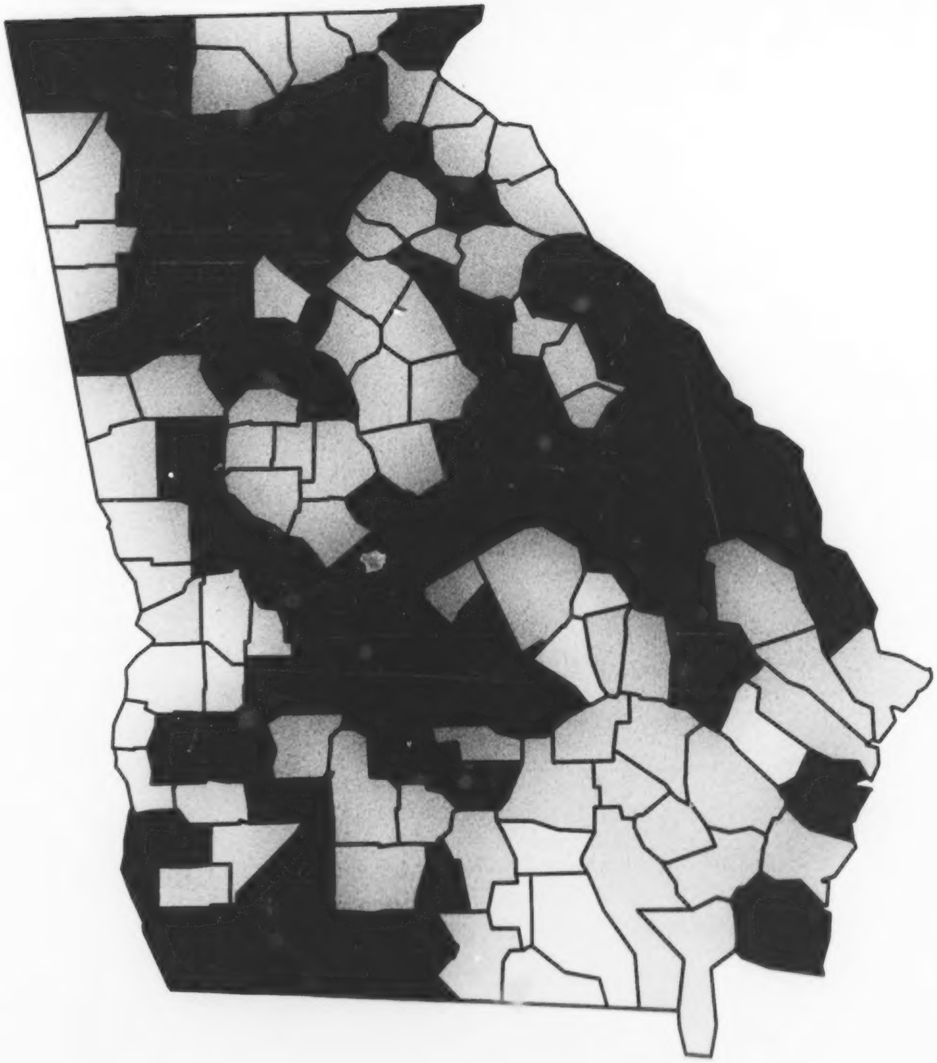
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Georgia

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

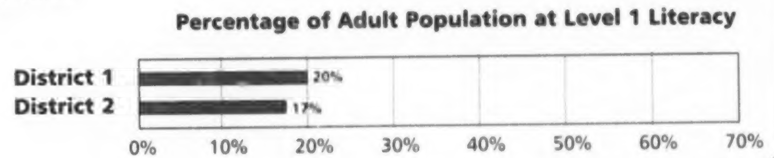
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

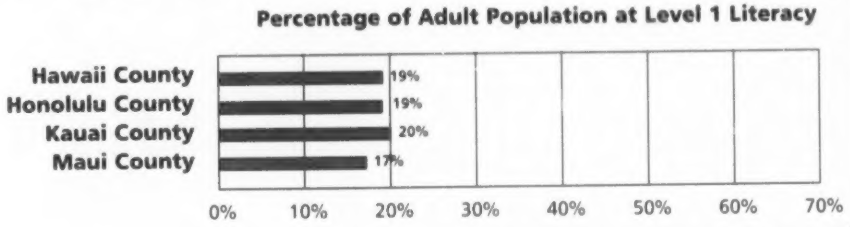
# Hawaii

## 18% of adult population is at Level 1 Literacy

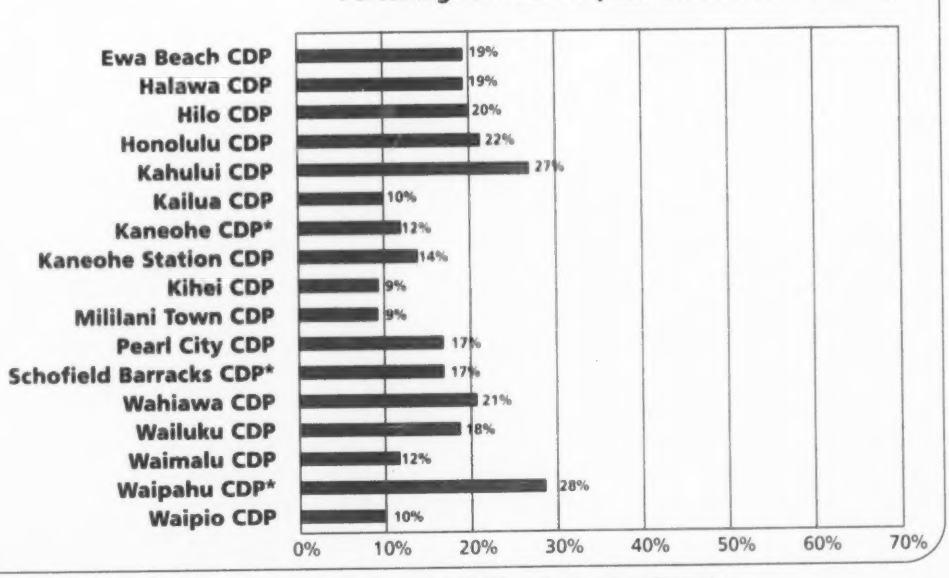
### Congressional Districts



### Counties (with adult populations of at least 5,000)



### Municipalities (with adult populations of at least 5,000)



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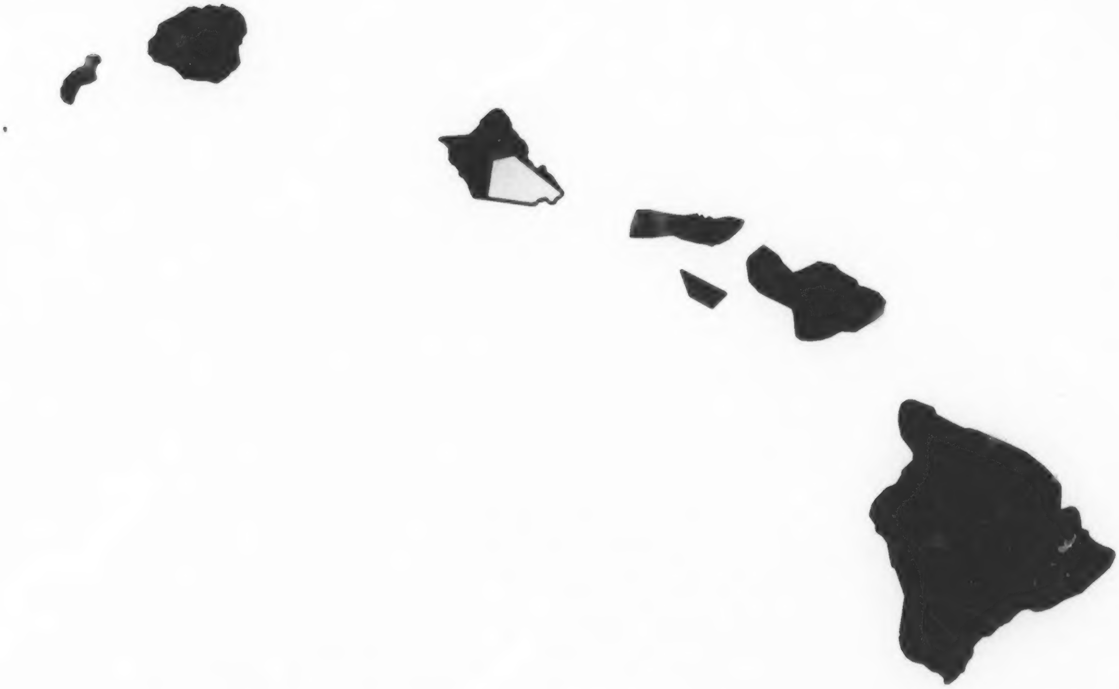
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Hawaii

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

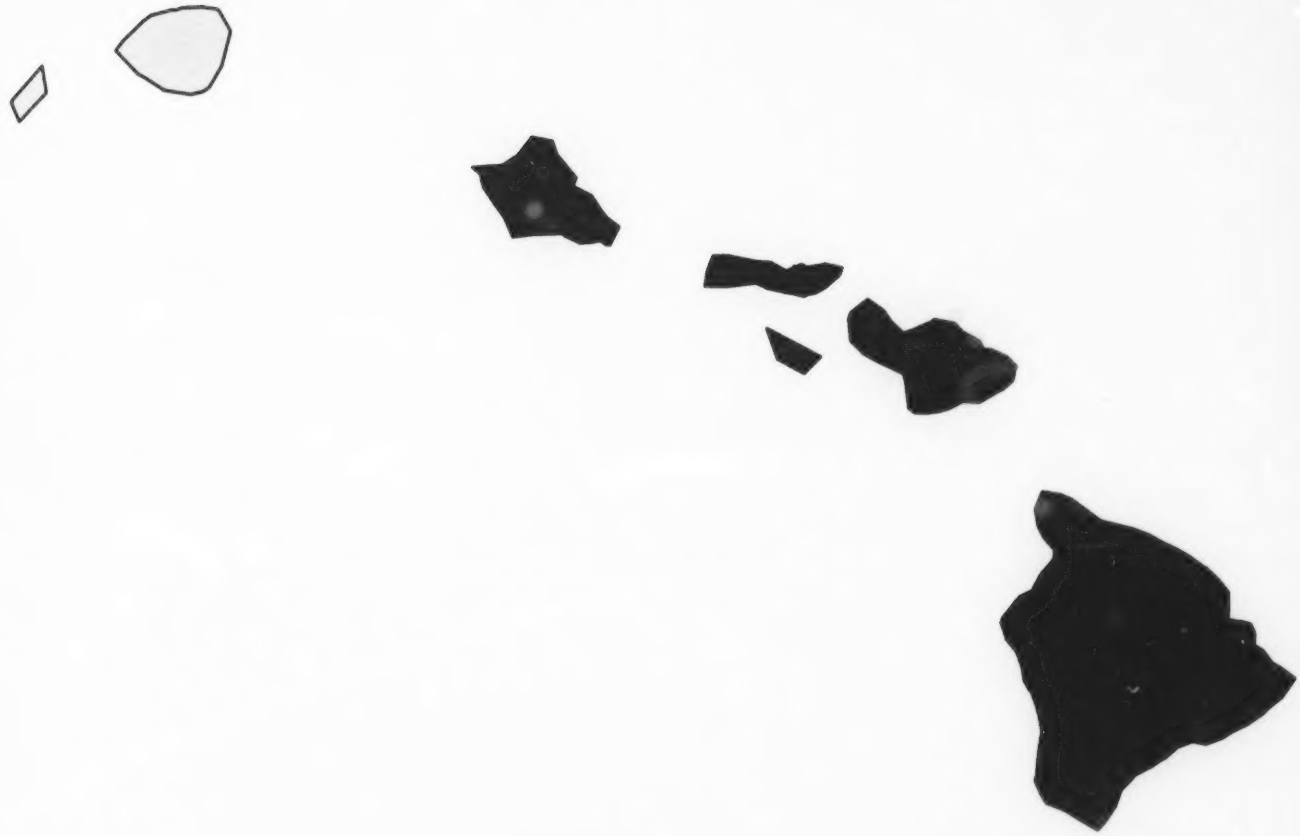
| | |
|---|---|
| ■ 30% or greater | (1) |
| □ 20% to 30% | (1) |
| ■ 15% to 20% | (1) |
| ■ 10% to 15% | (4) |
| ▨ 10% or less | (6) |
| □ no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Hawaii

## Level 1 Adult Literacy Rates, by County

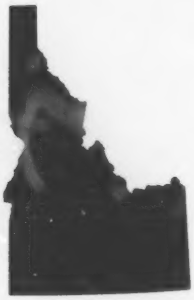


Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

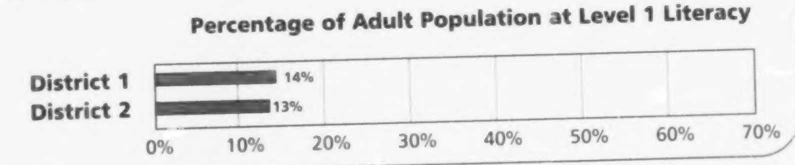
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).



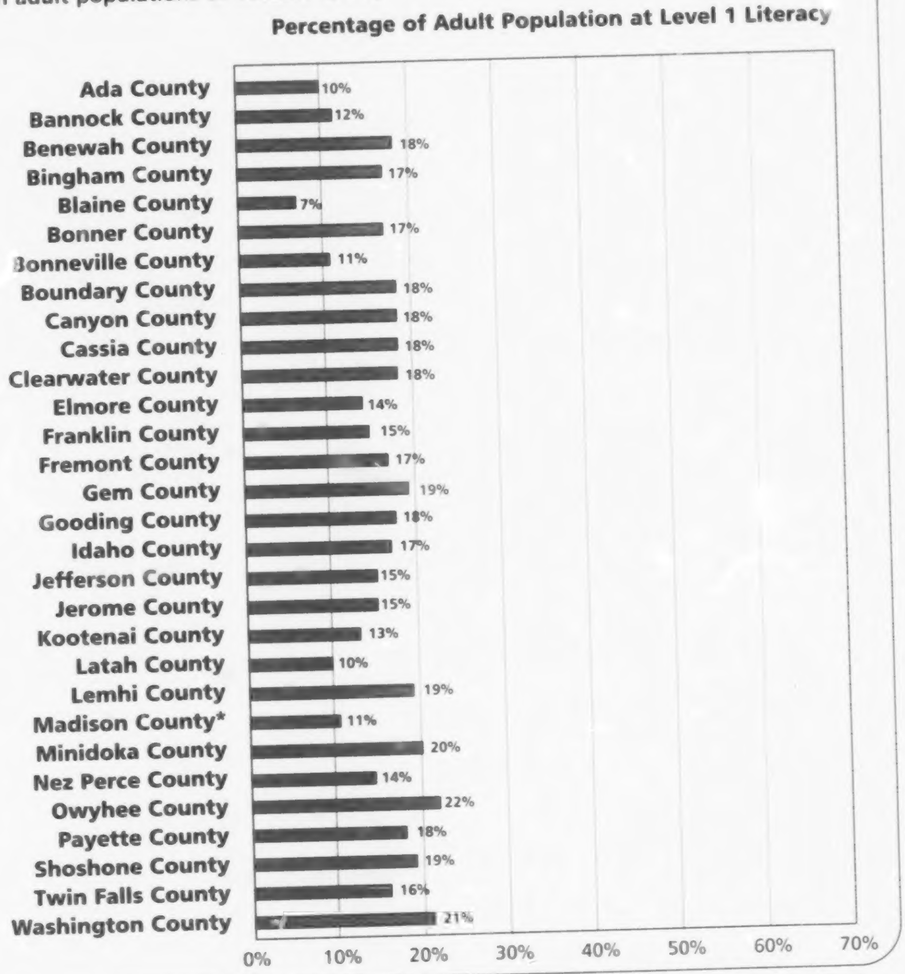
# Idaho

## 13% of adult population is at Level 1 Literacy

### Congressional Districts



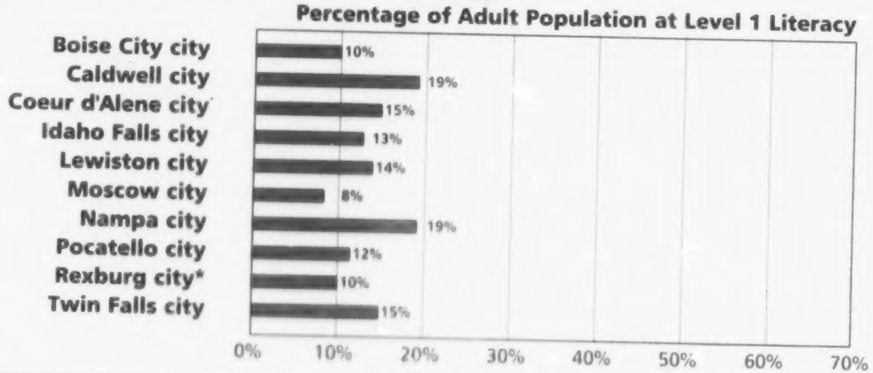
### Counties (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Idaho

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

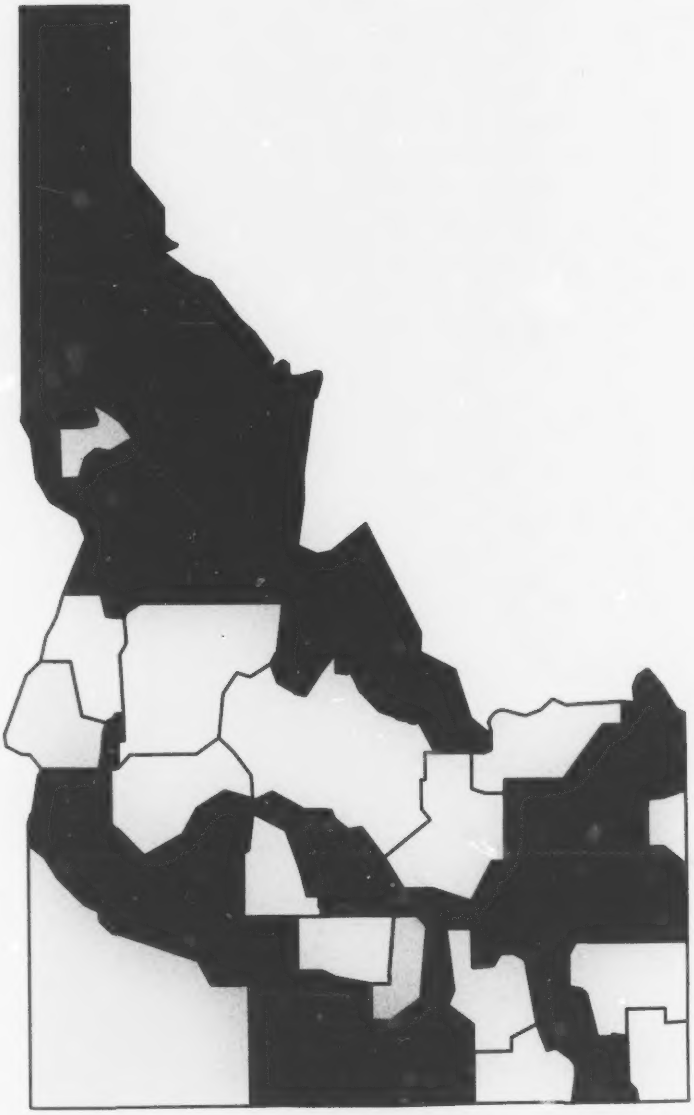
- ■ 30% or greater (1)
- ▨ 20% to 30% (1)
- ■ 15% to 20% (1)
- ■ 10% to 15% (4)
- ■ 10% or less (6)
- □ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Idaho

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

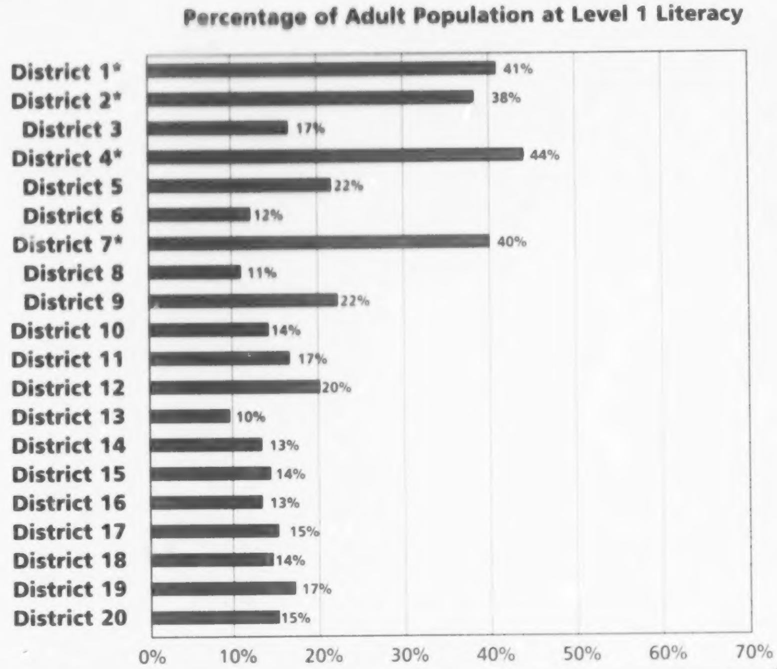
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

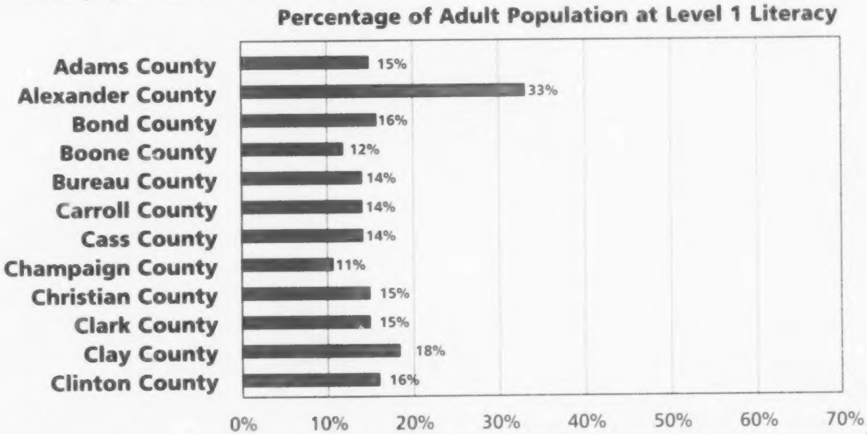
# Illinois

## 20% of adult population is at Level 1 Literacy

### Congressional Districts



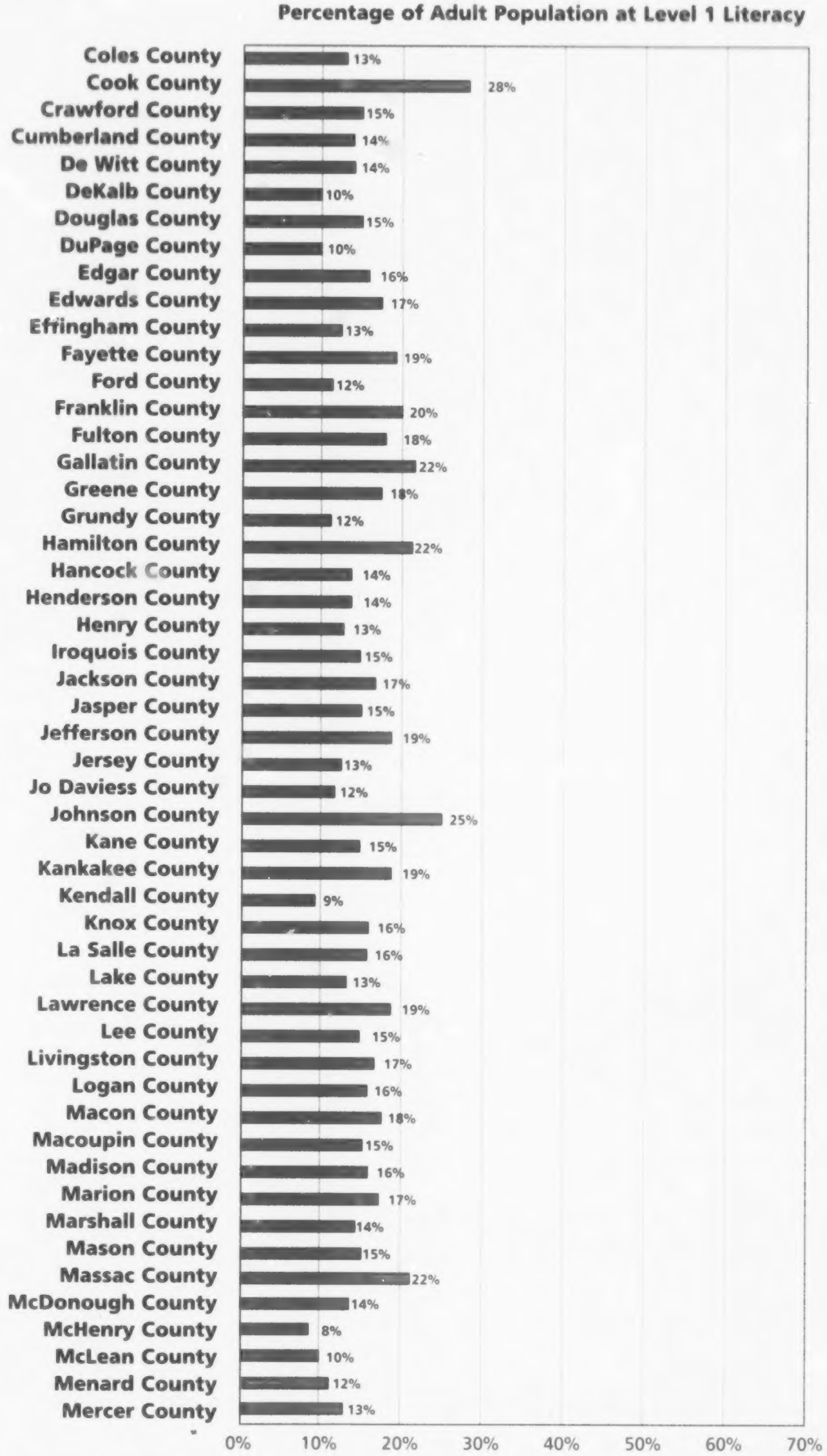
### Counties (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

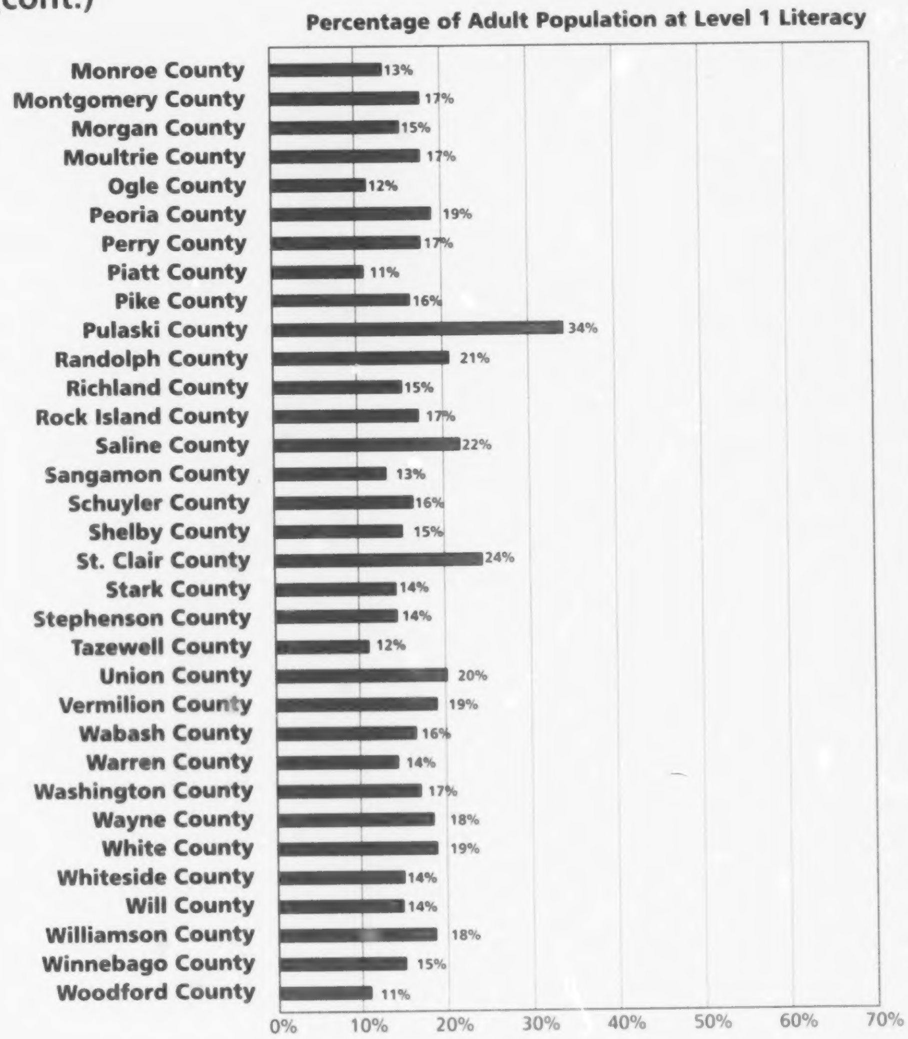
## Counties (cont.)



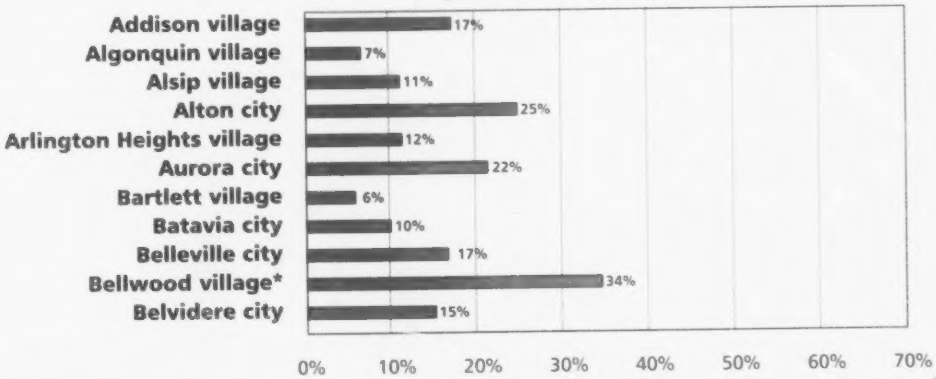
* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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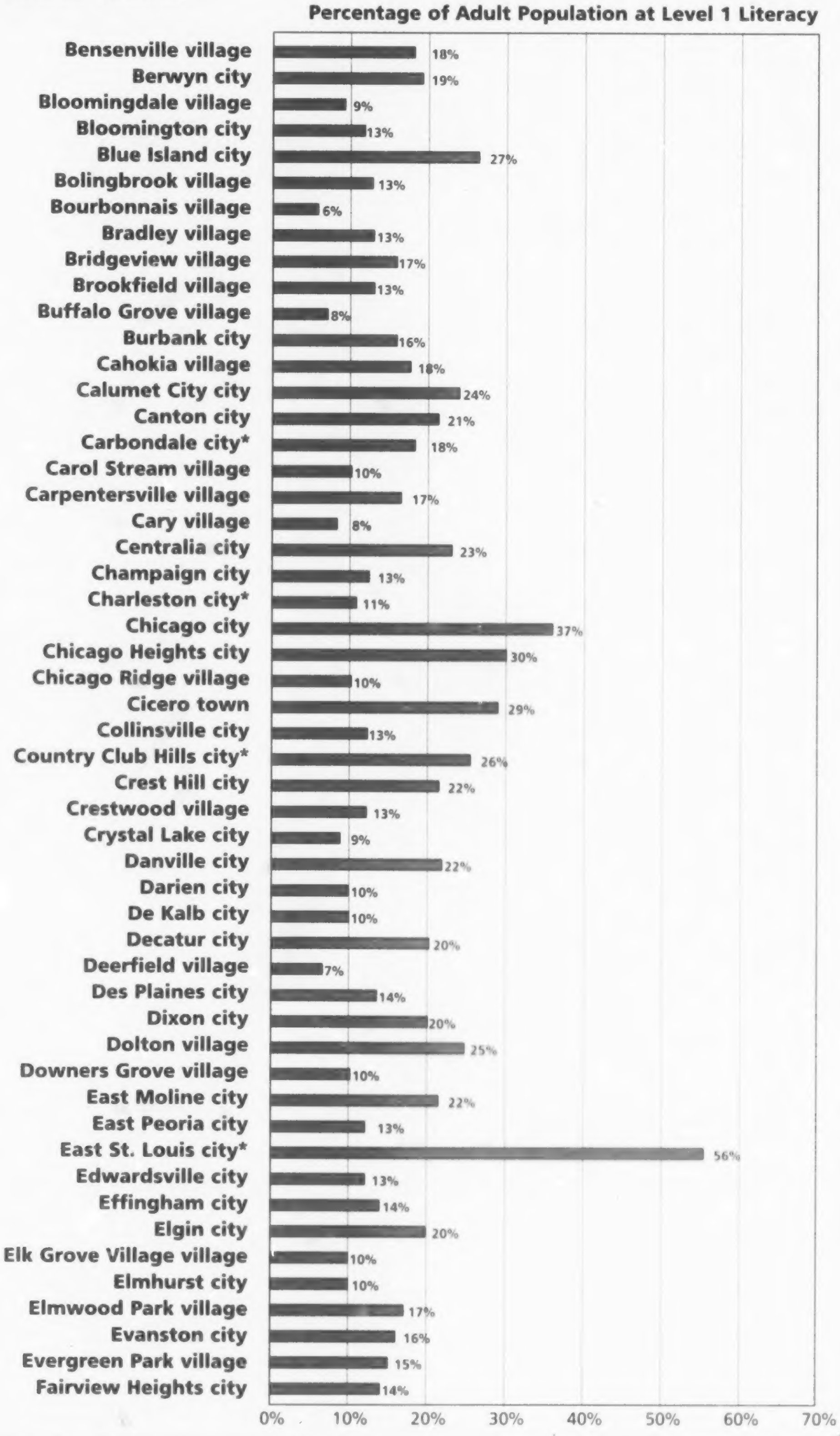
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



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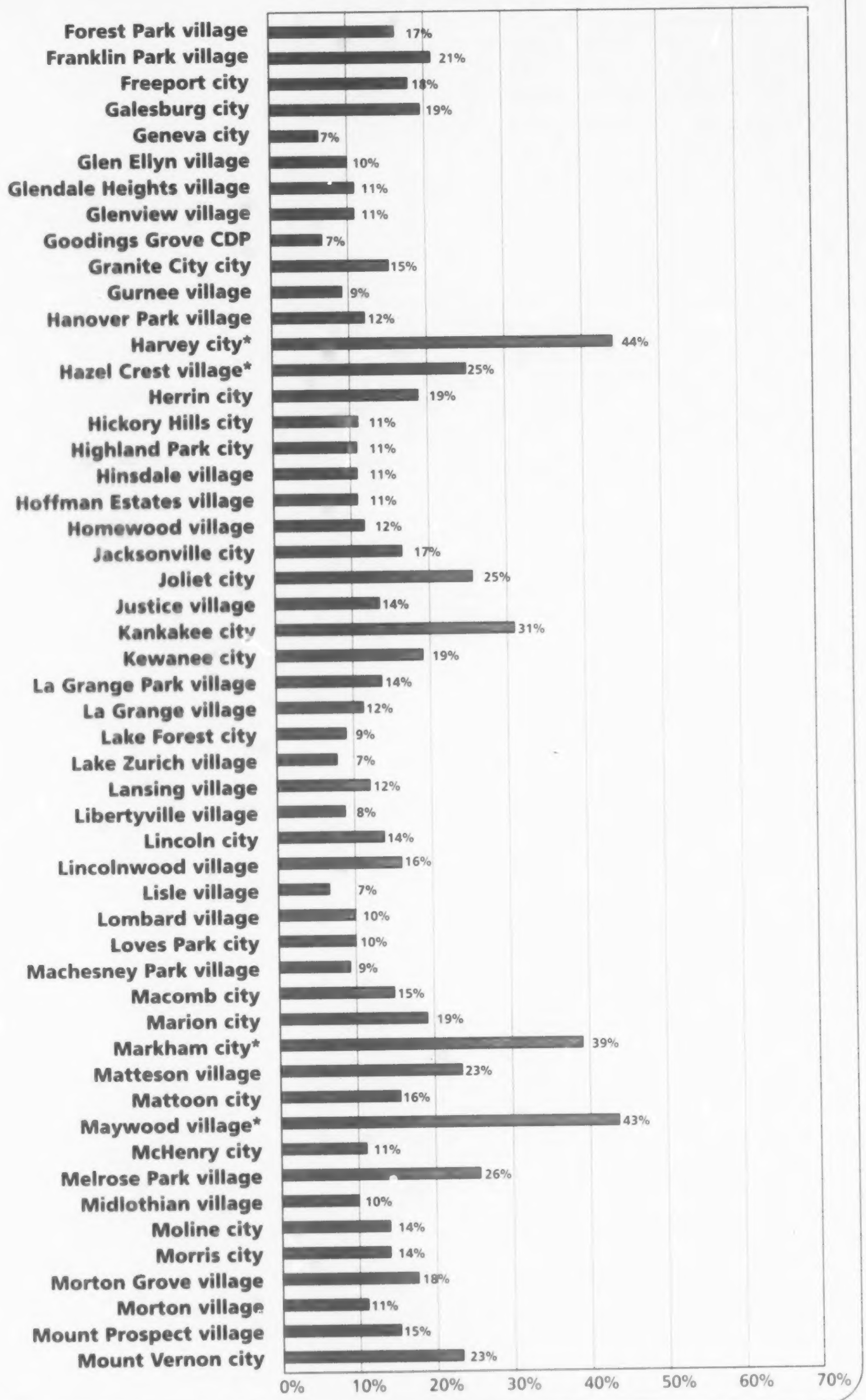
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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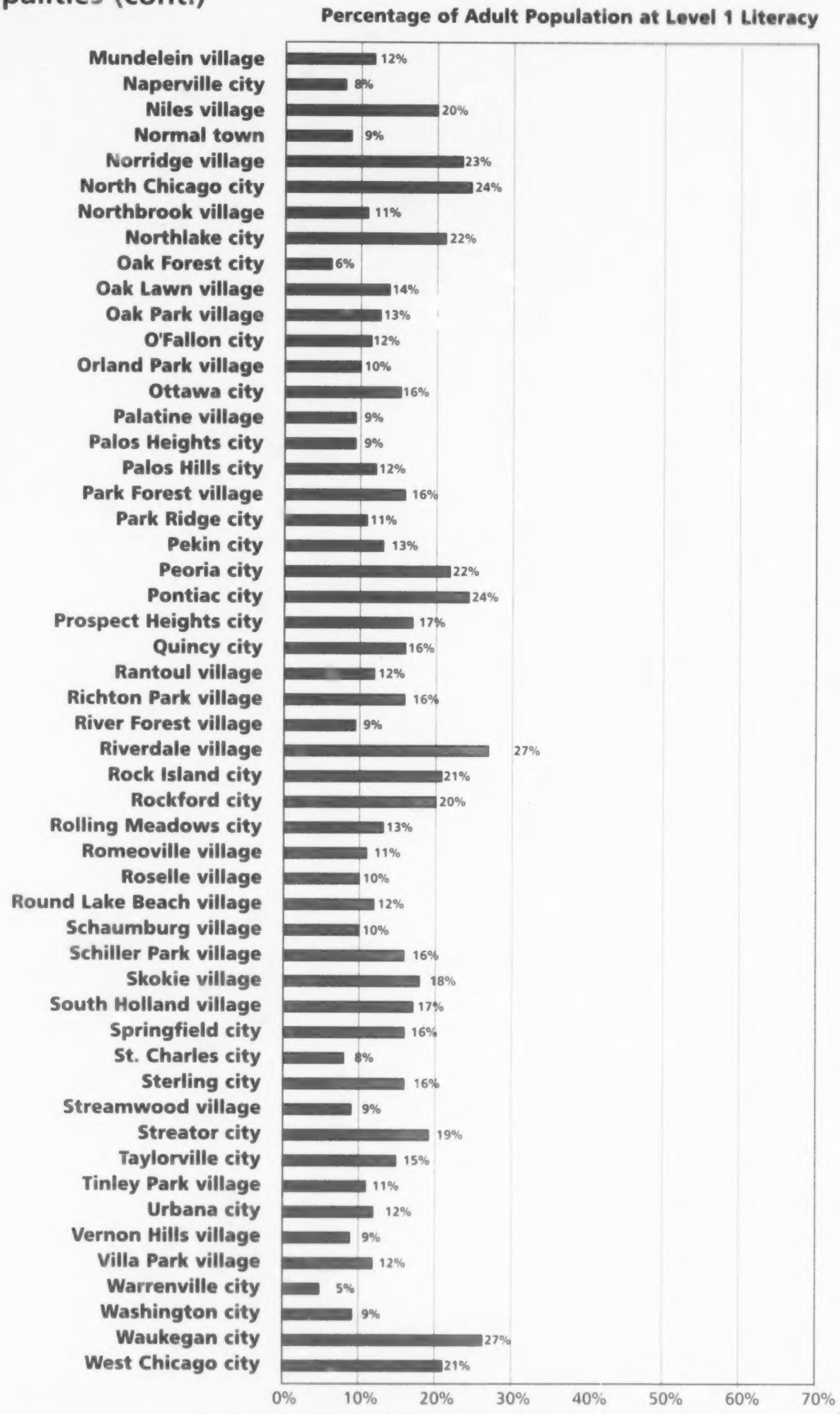
## Municipalities (cont.)



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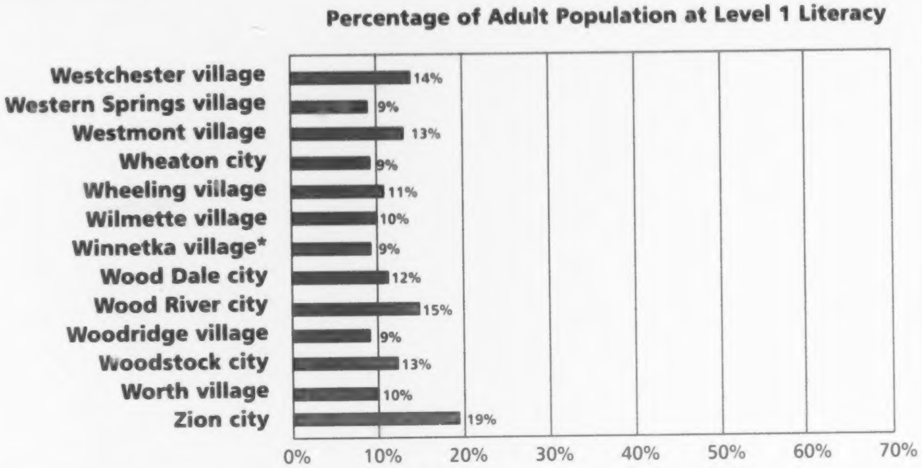
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



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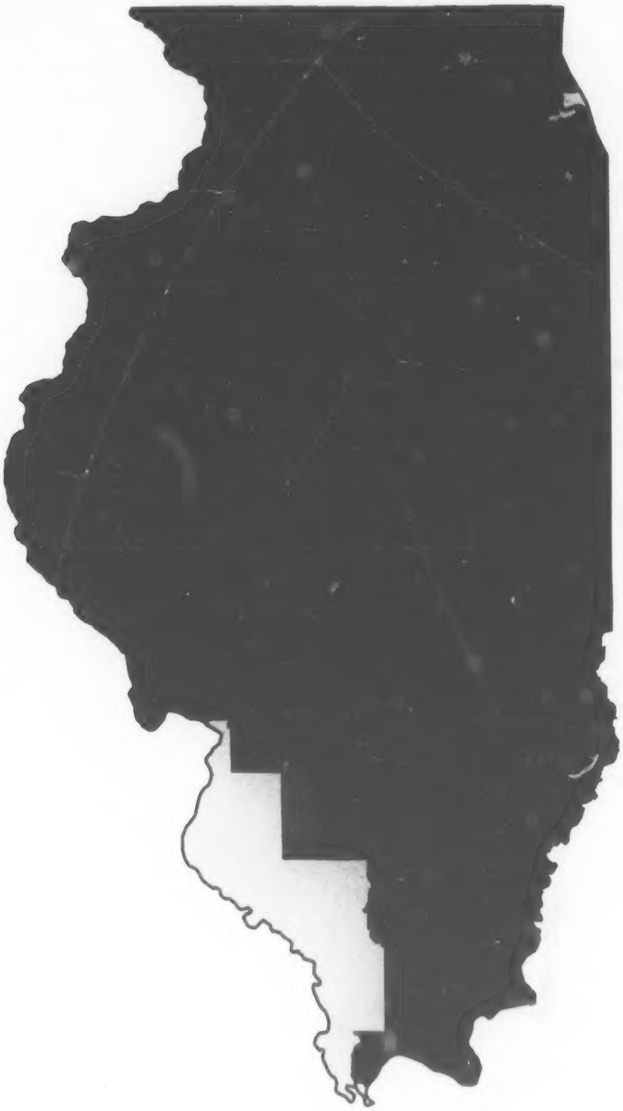
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Illinois

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

- ■ 30% or greater (1)
- □ 20% to 30% (1)
- ■ 15% to 20% (1)
- ■ 10% to 15% (4)
- ■ 10% or less (6)
- □ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

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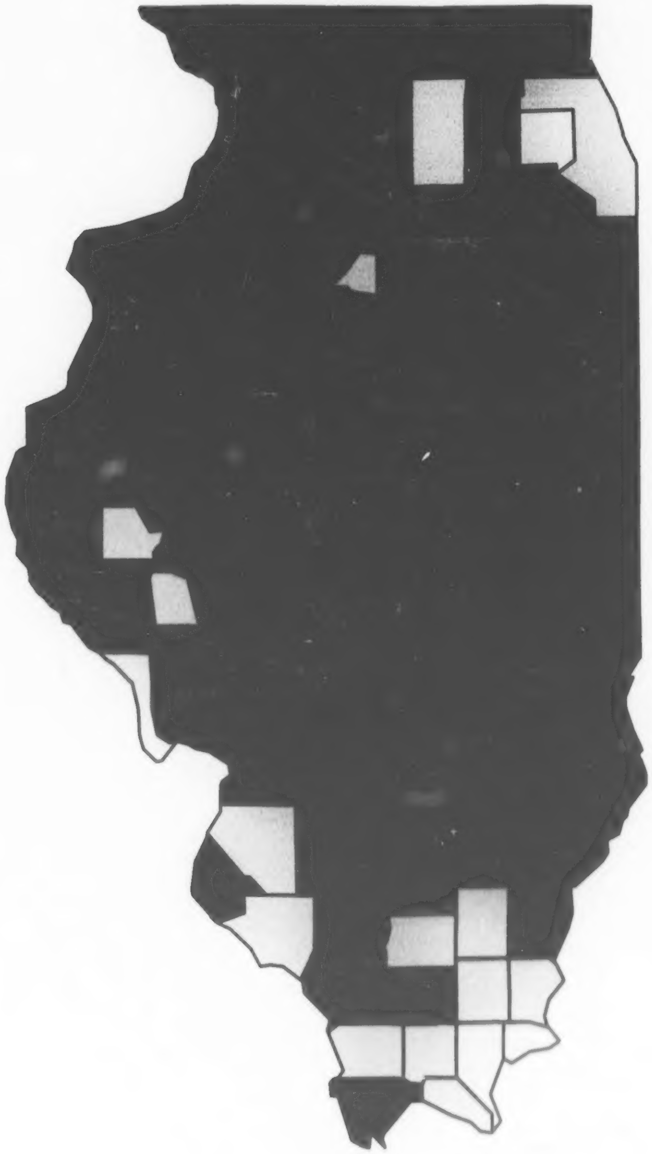
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Illinois

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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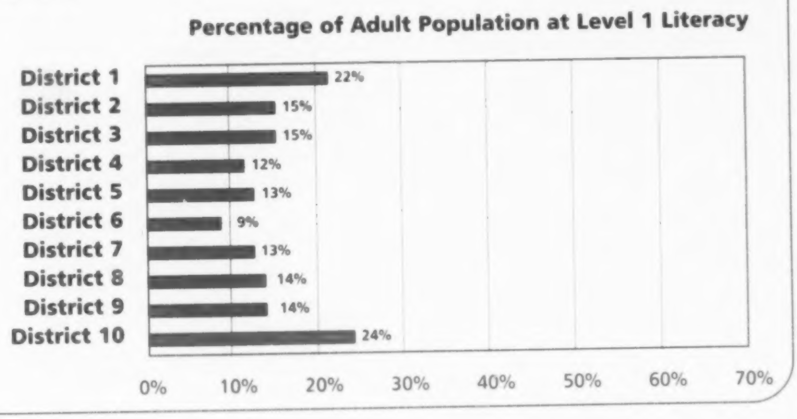
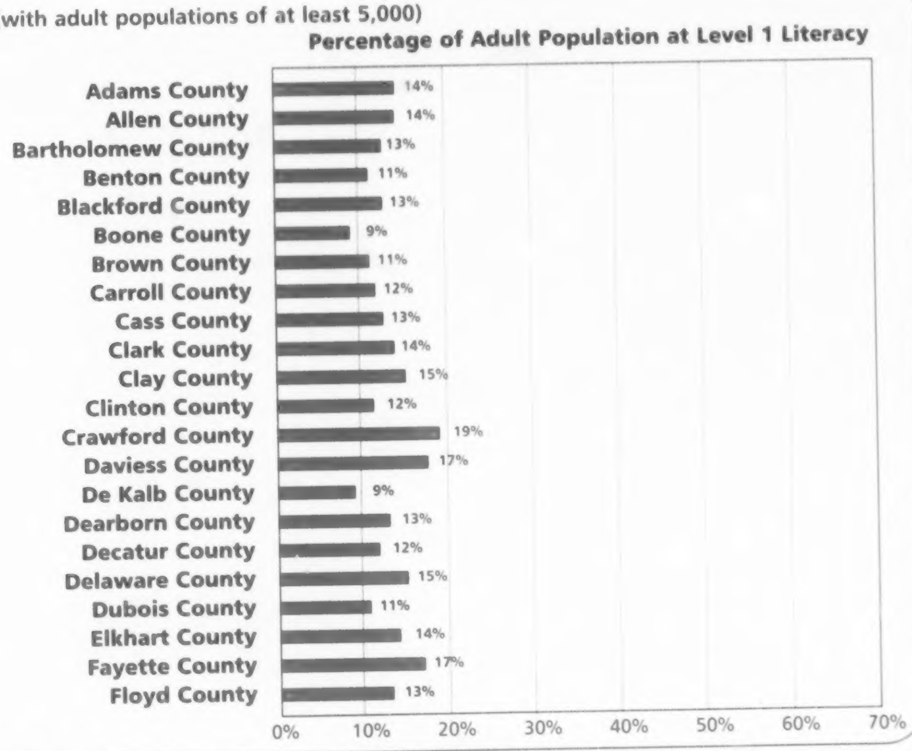
# Indiana

## 16% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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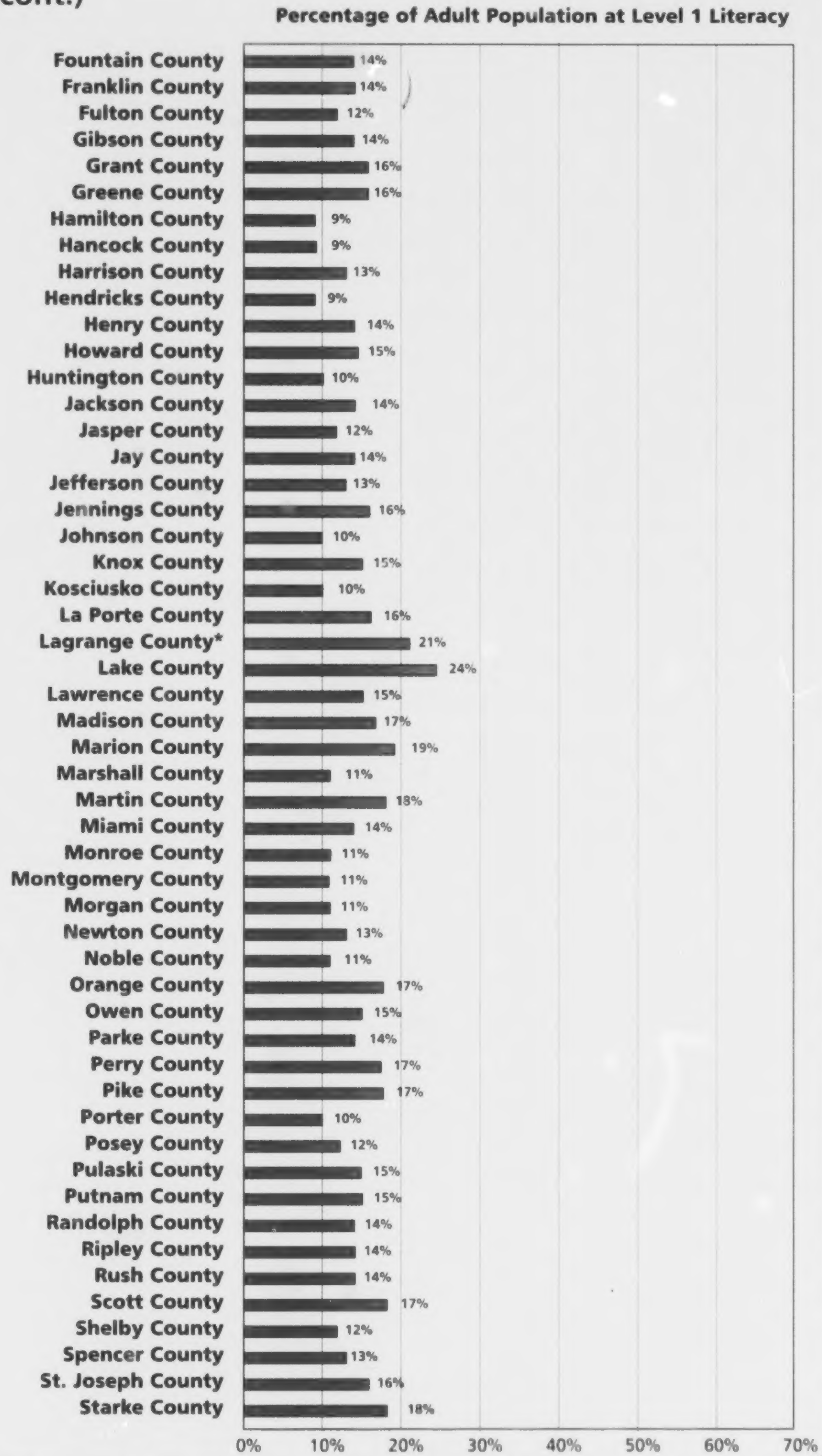
## Counties (cont.)



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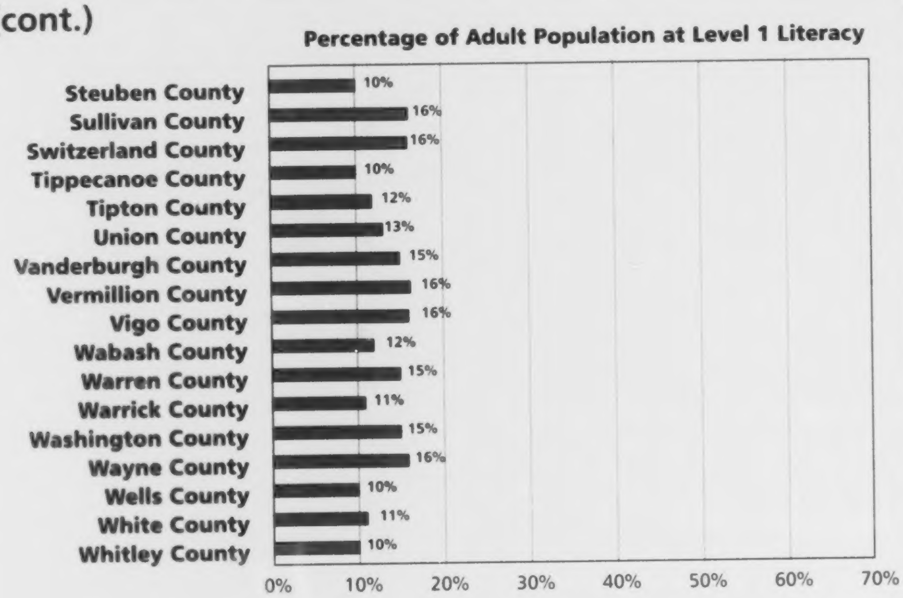
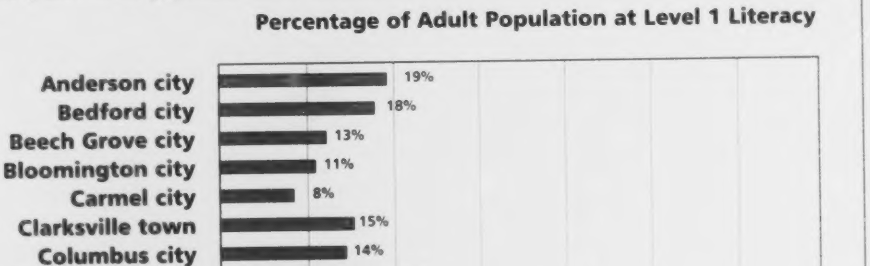
## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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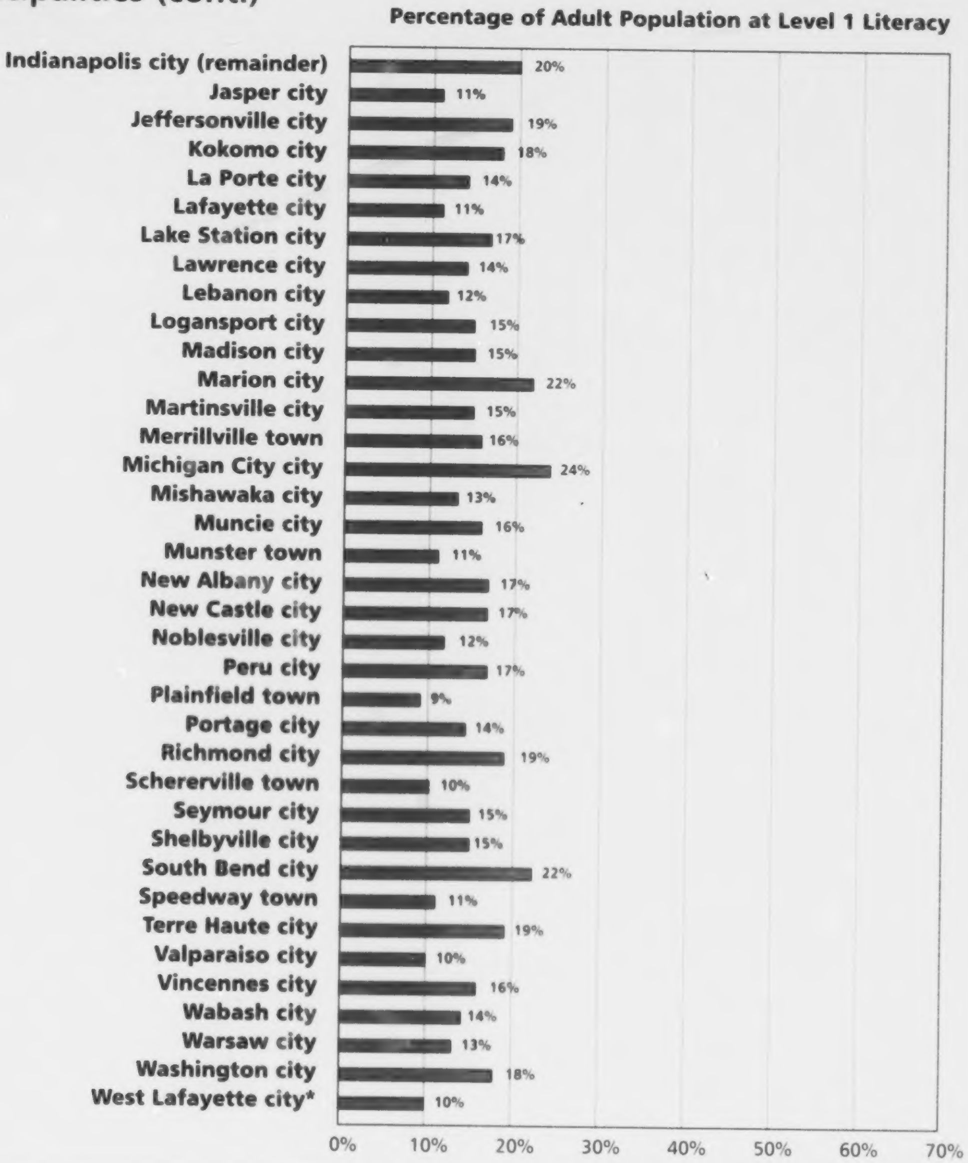
## Municipalities (cont.)



Percentage of Adult Population at Level 1 Literacy

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# The State of Literacy in America: Indiana

## Level 1 Adult Literacy Rates, by Congressional District

Source: U.S. Department of Education
Division of Adult Education and Literacy

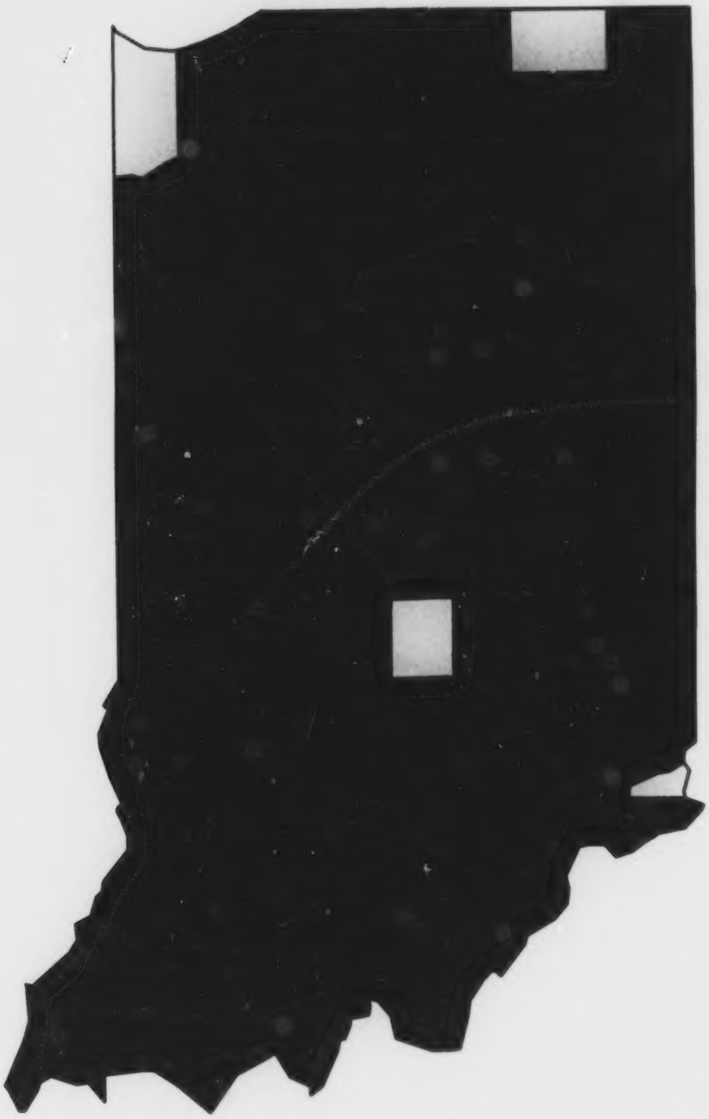
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

# The State of Literacy in America: Indiana

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

|  |  |  |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

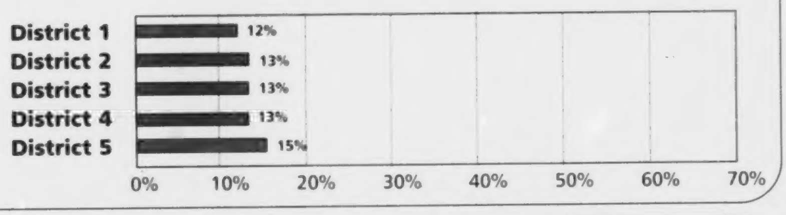
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# Iowa

## 13% of adult population is at Level 1 Literacy

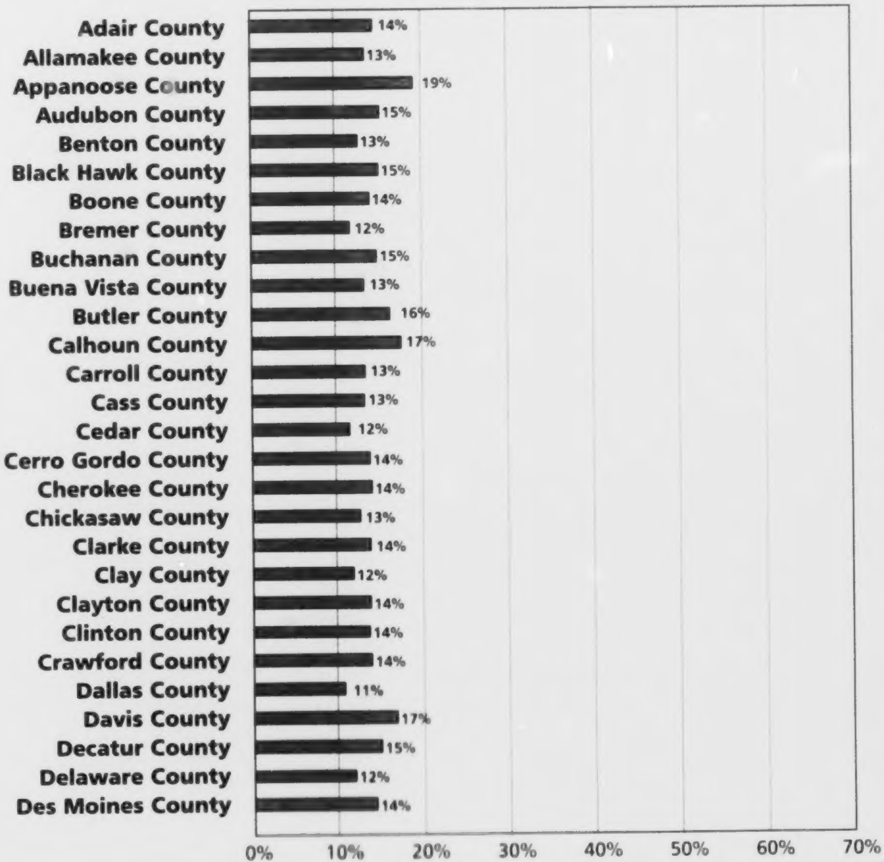
### Congressional Districts

Percentage of Adult Population at Level 1 Literacy



### Counties (with adult populations of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



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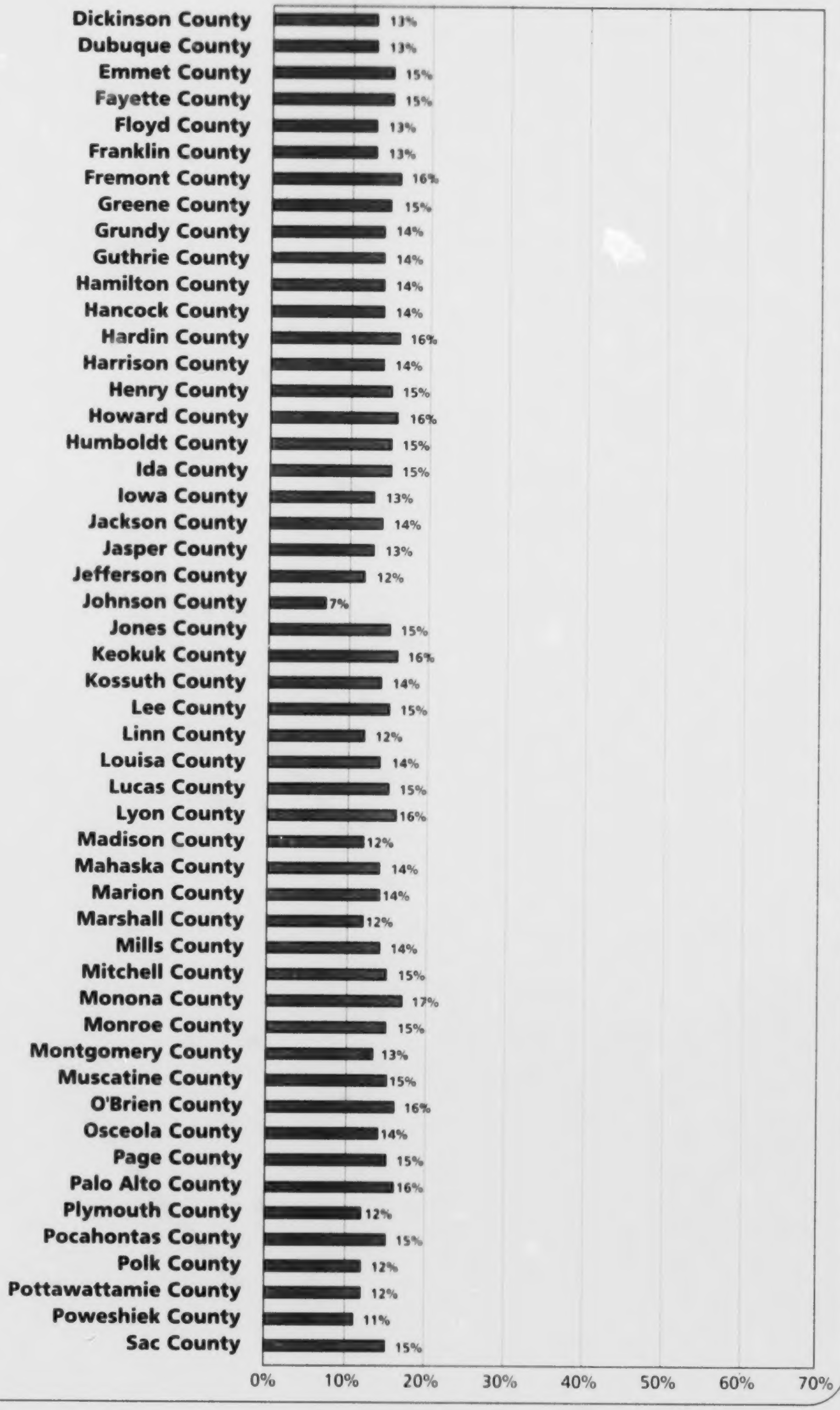
## Counties (cont.)

Percentage of Adult Population at Level 1 Literacy



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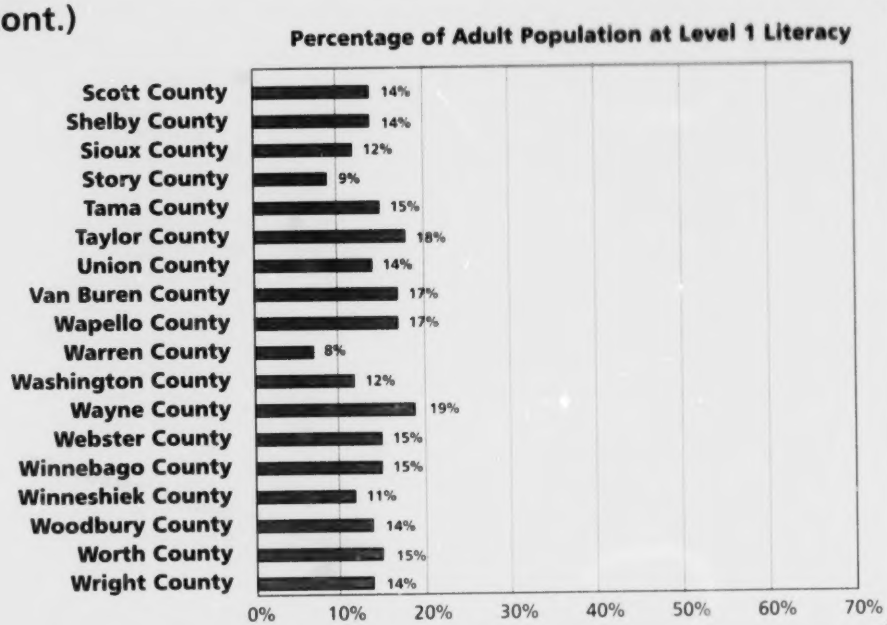
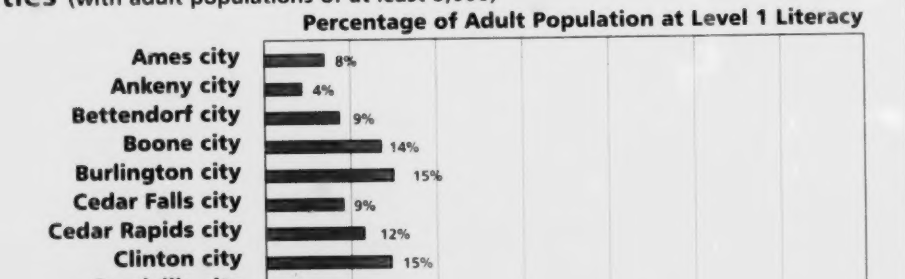
## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Iowa

## Level 1 Adult Literacy Rates, by Congressional District

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

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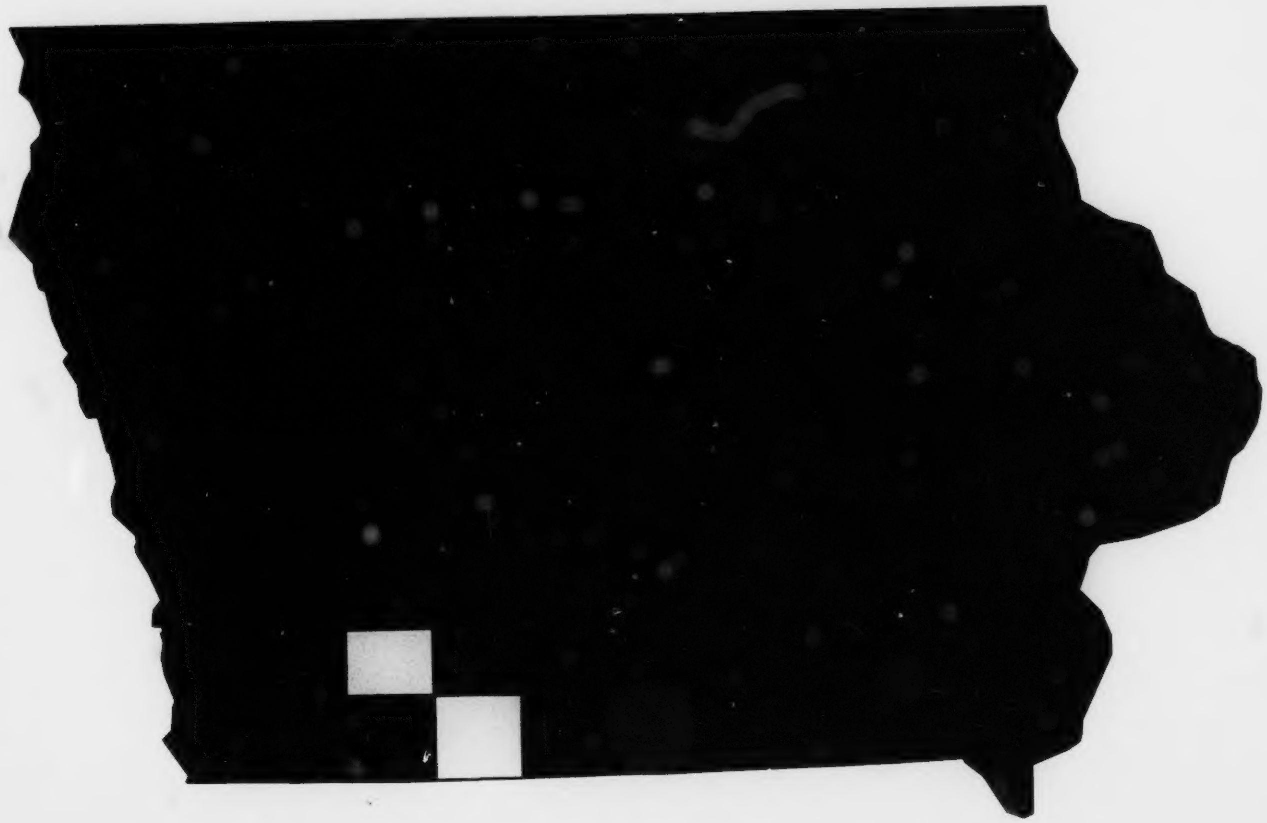
Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ☐ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| ☐ | no estimate available | (14) |

# The State of Literacy in America: Iowa

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

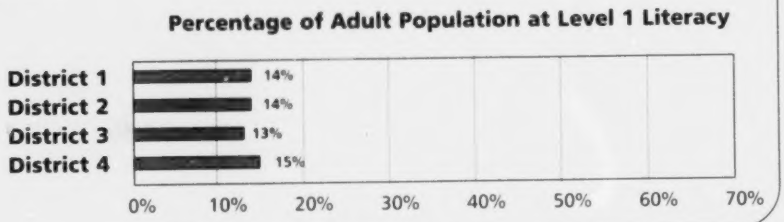
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

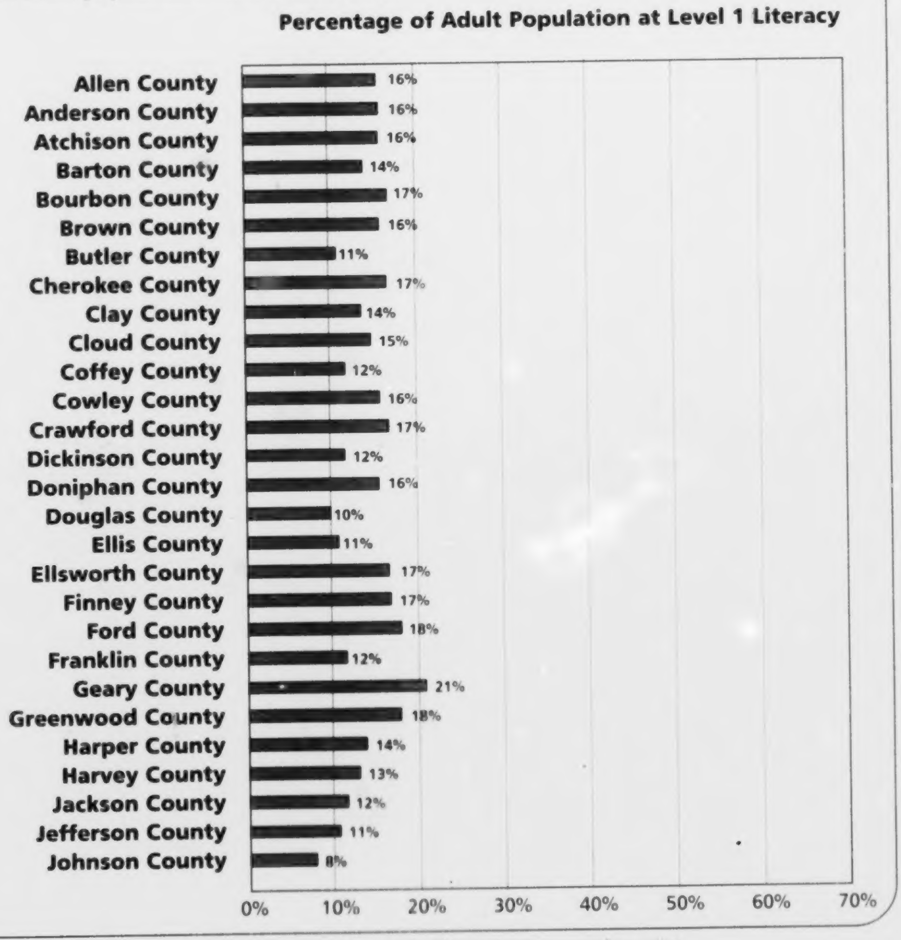
# Kansas

## 14% of population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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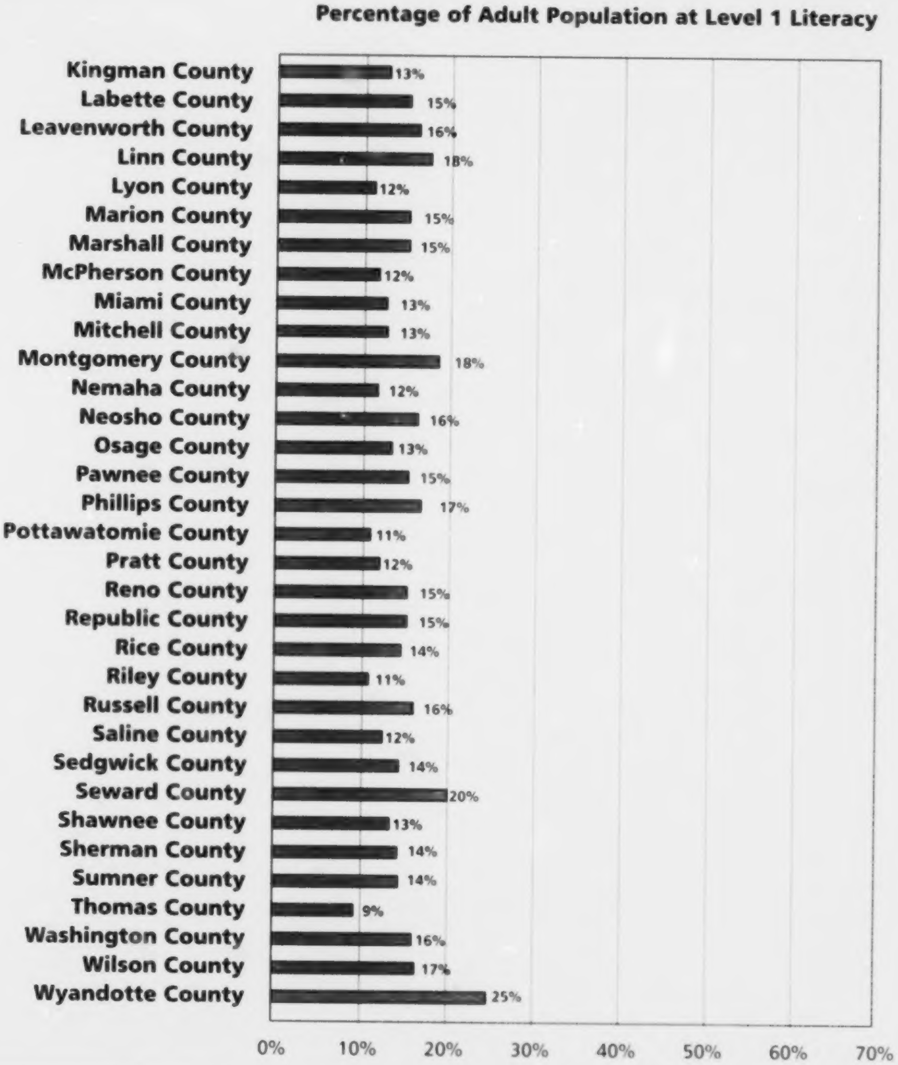
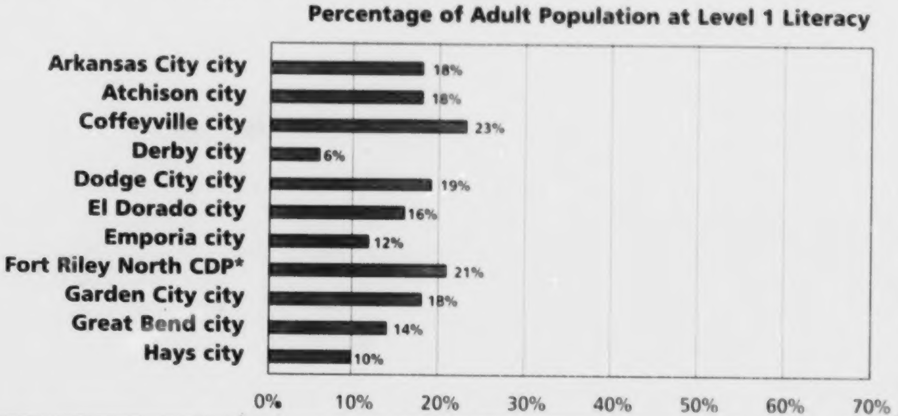
## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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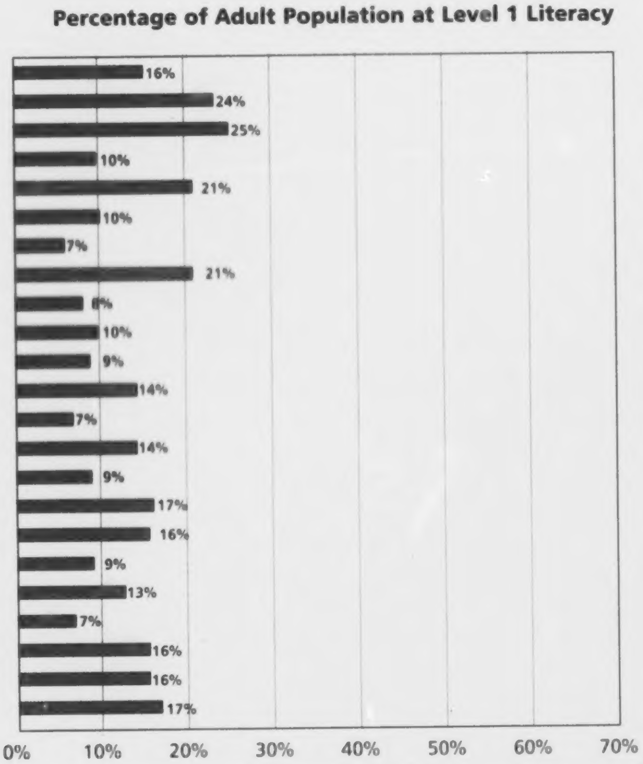
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



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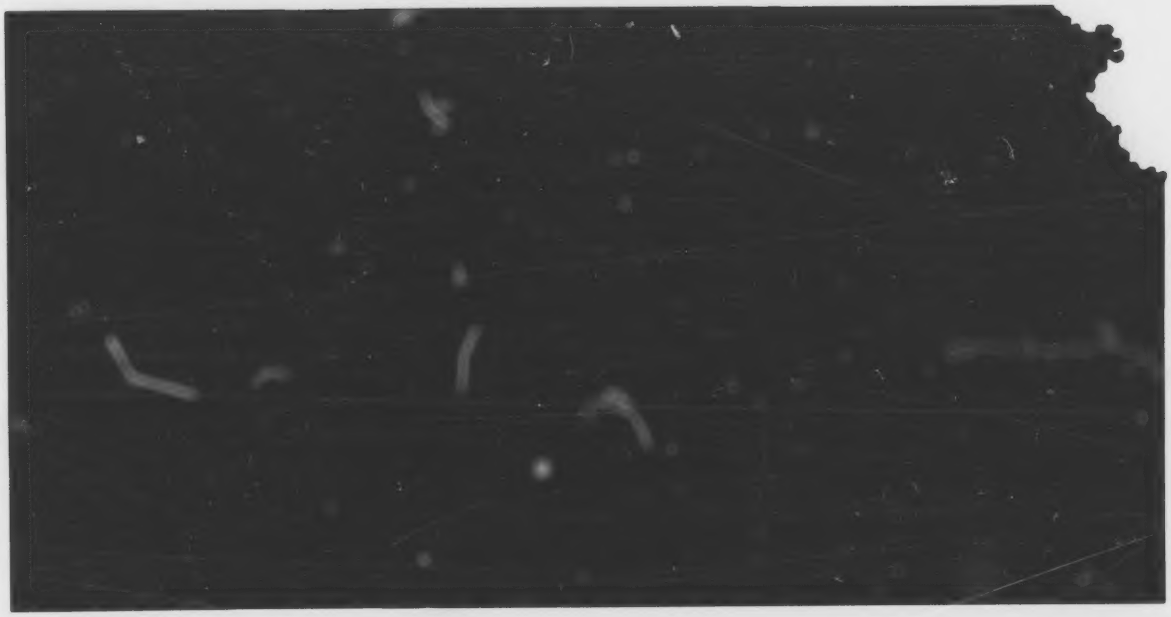
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Kansas

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

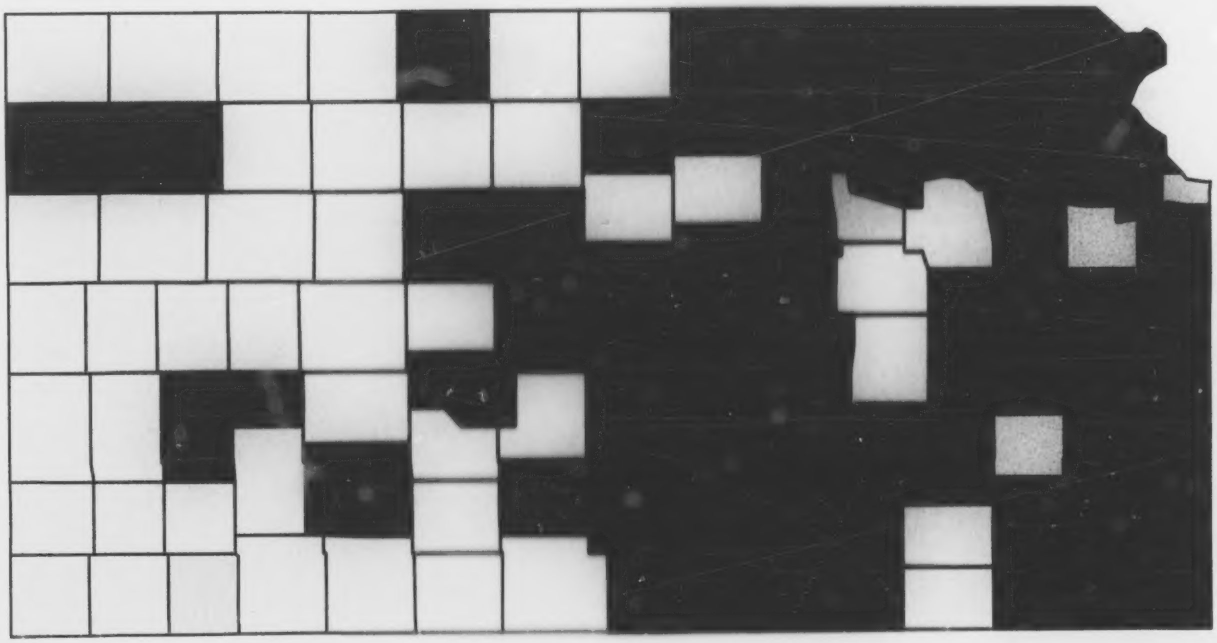
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Kansas

## Level 1 Adult Literacy Rates, by County

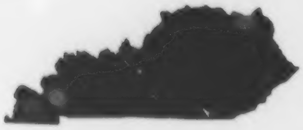


Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

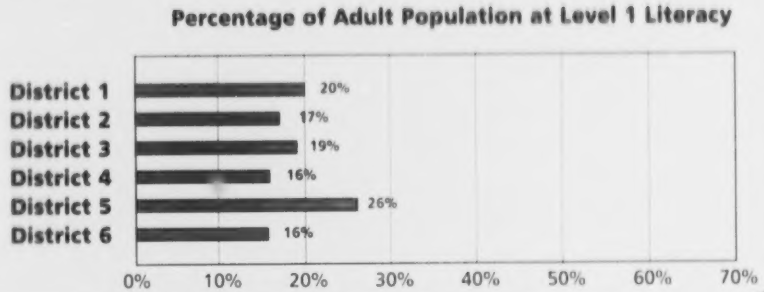
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).



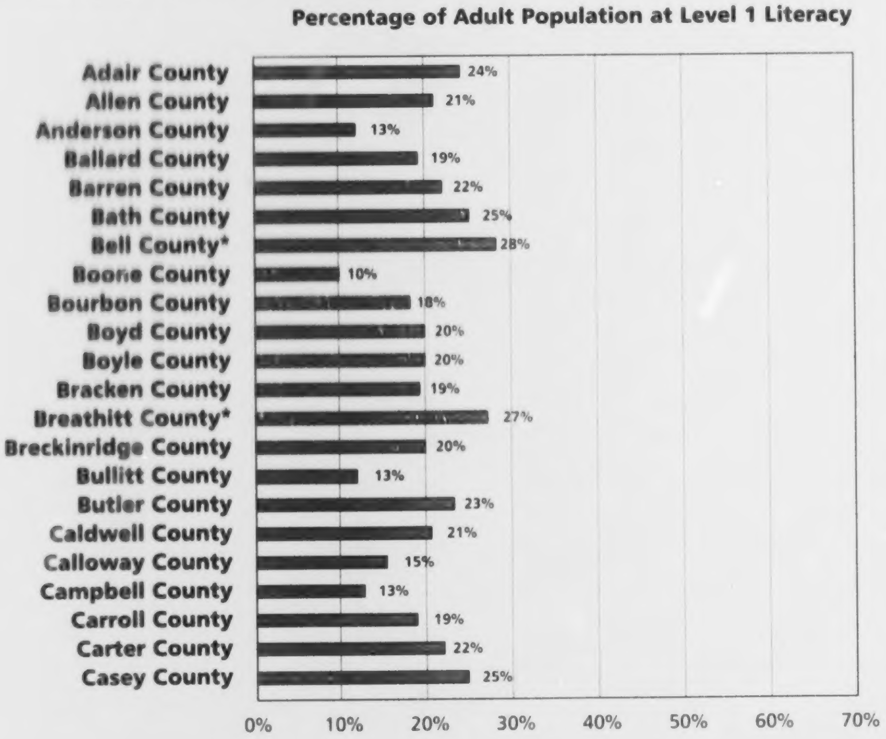
# Kentucky

## 19% of adult population is at Level 1 Literacy

### Congressional Districts



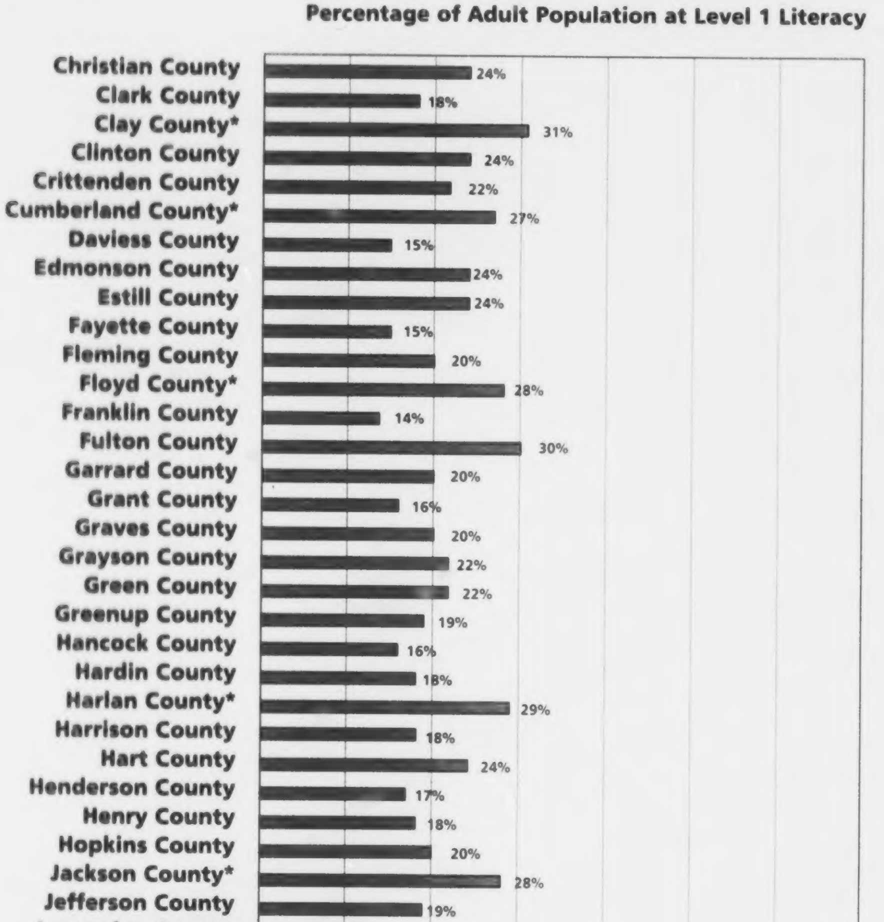
### Counties (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



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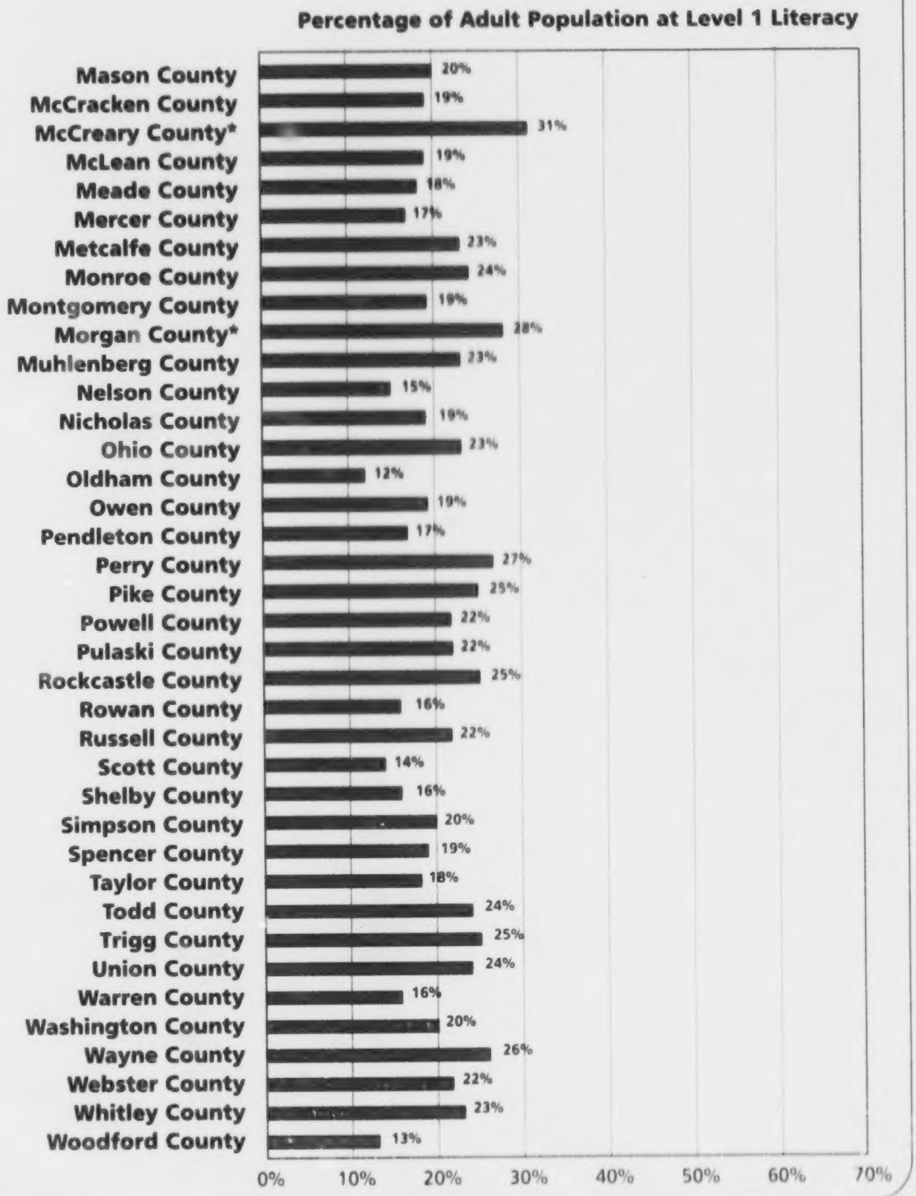
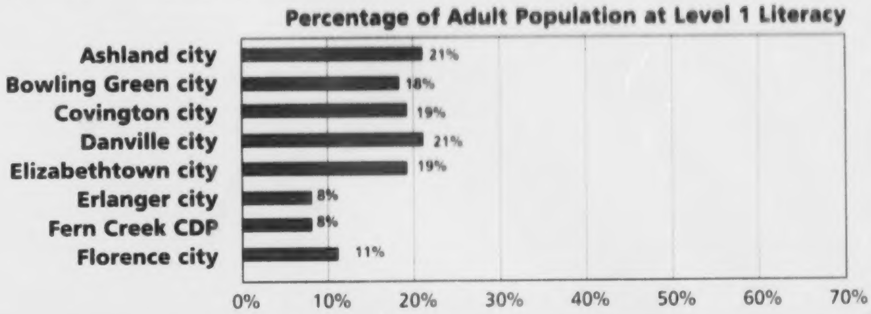
## Counties



## Municipalities (with adult populations of at least 5,000)



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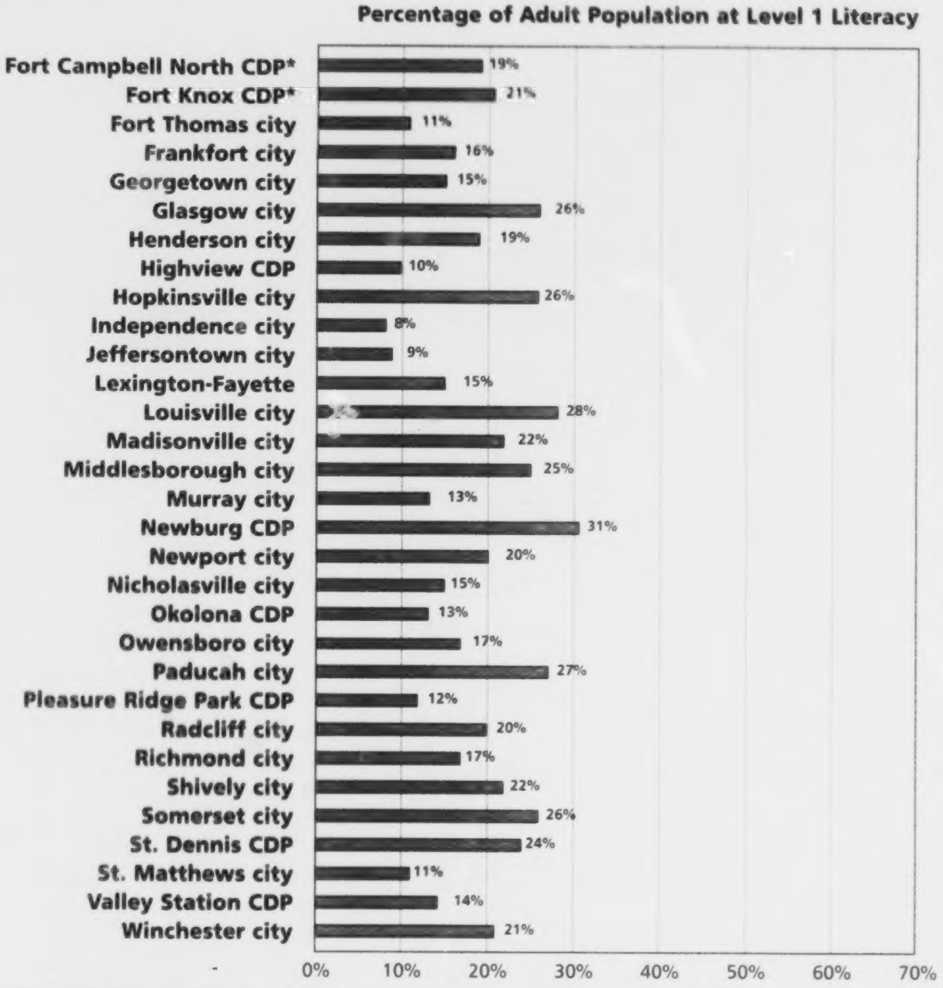
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



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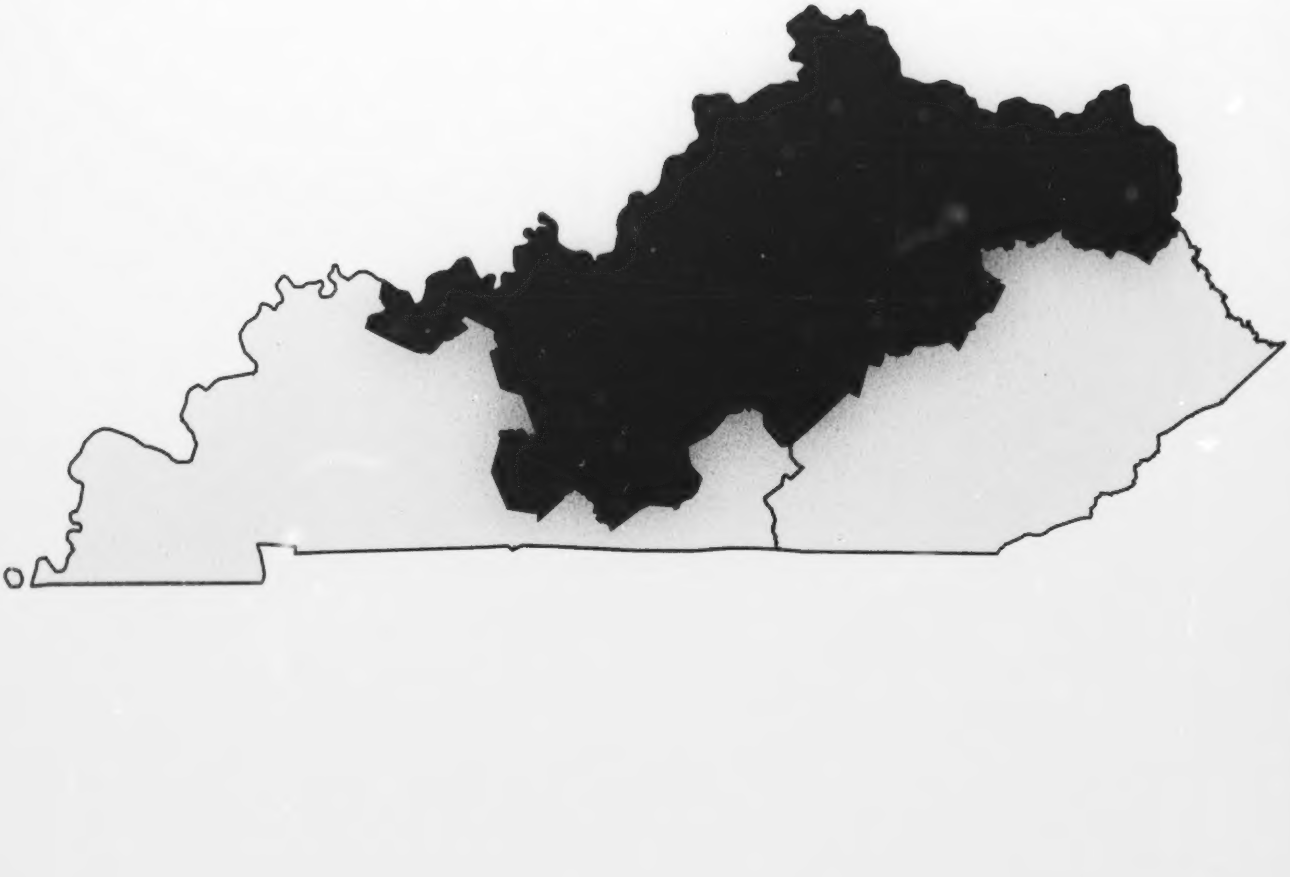
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Kentucky

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

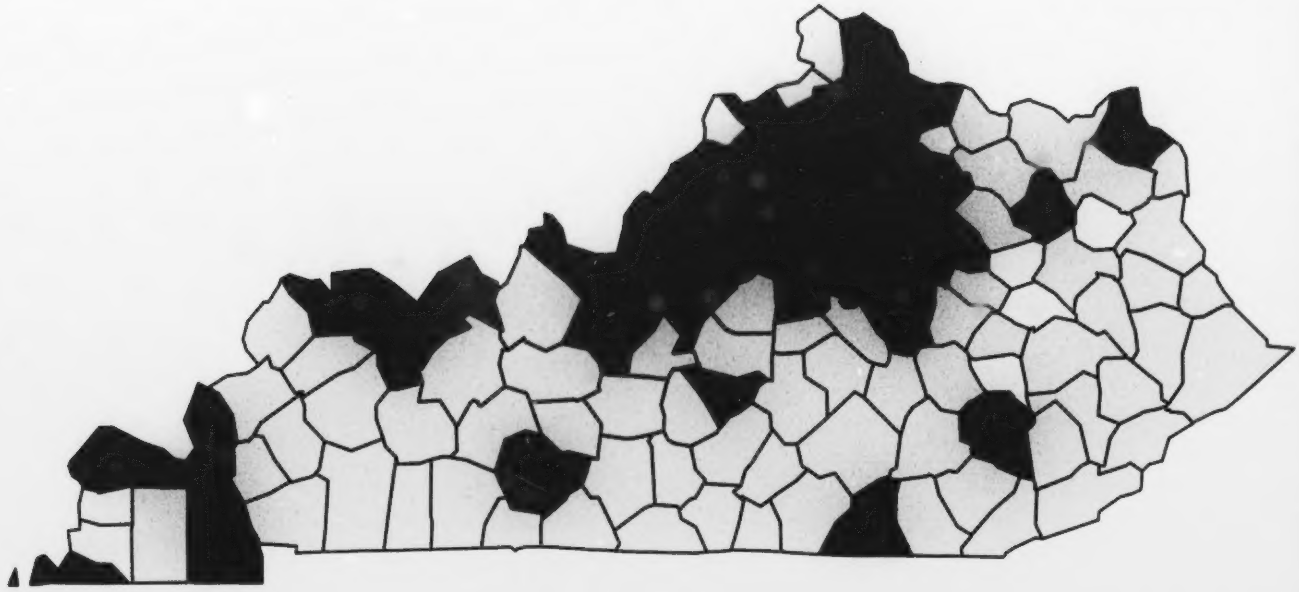
- ■ 30% or greater (1)
- ☐ 20% to 30% (1)
- ■ 15% to 20% (1)
- ■ 10% to 15% (4)
- ■ 10% or less (6)
- ☐ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Kentucky

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

■ 30% or greater (1)
□ 20% to 30% (1)
■ 15% to 20% (1)
■ 10% to 15% (4)
■ 10% or less (6)
□ no estimate available (14)

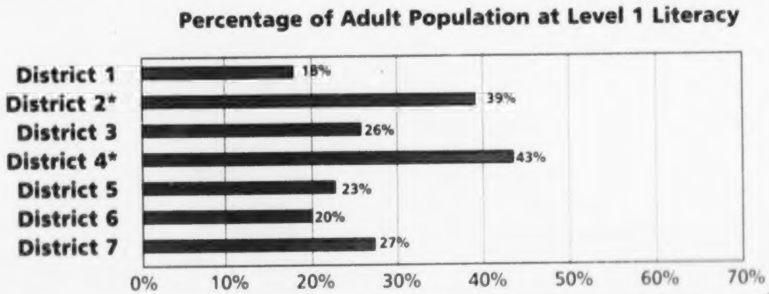
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

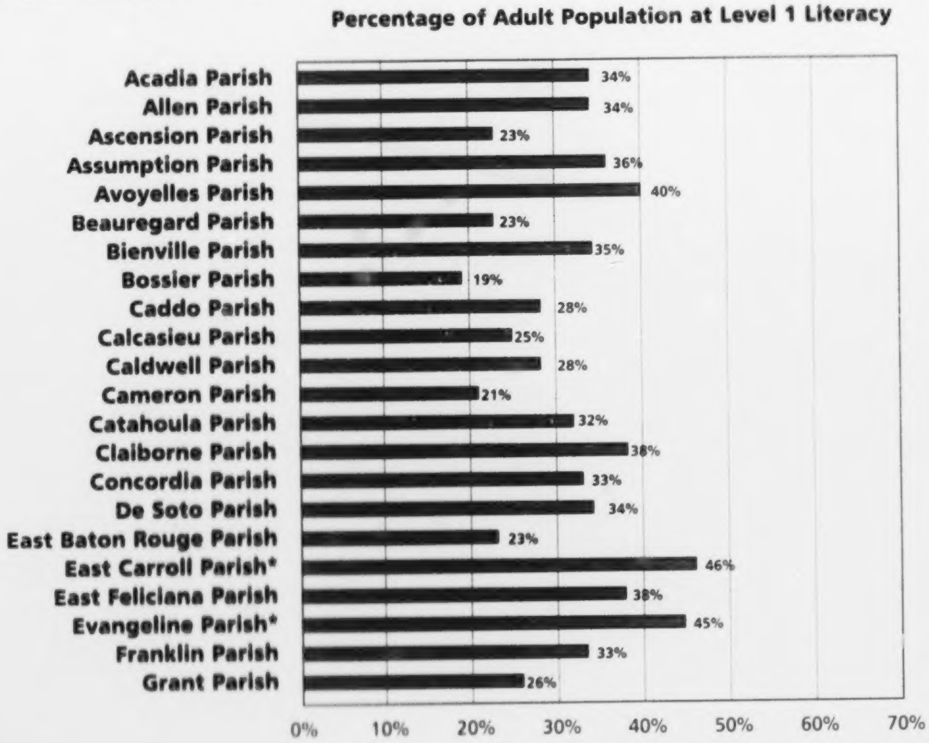
# Louisiana

## 28% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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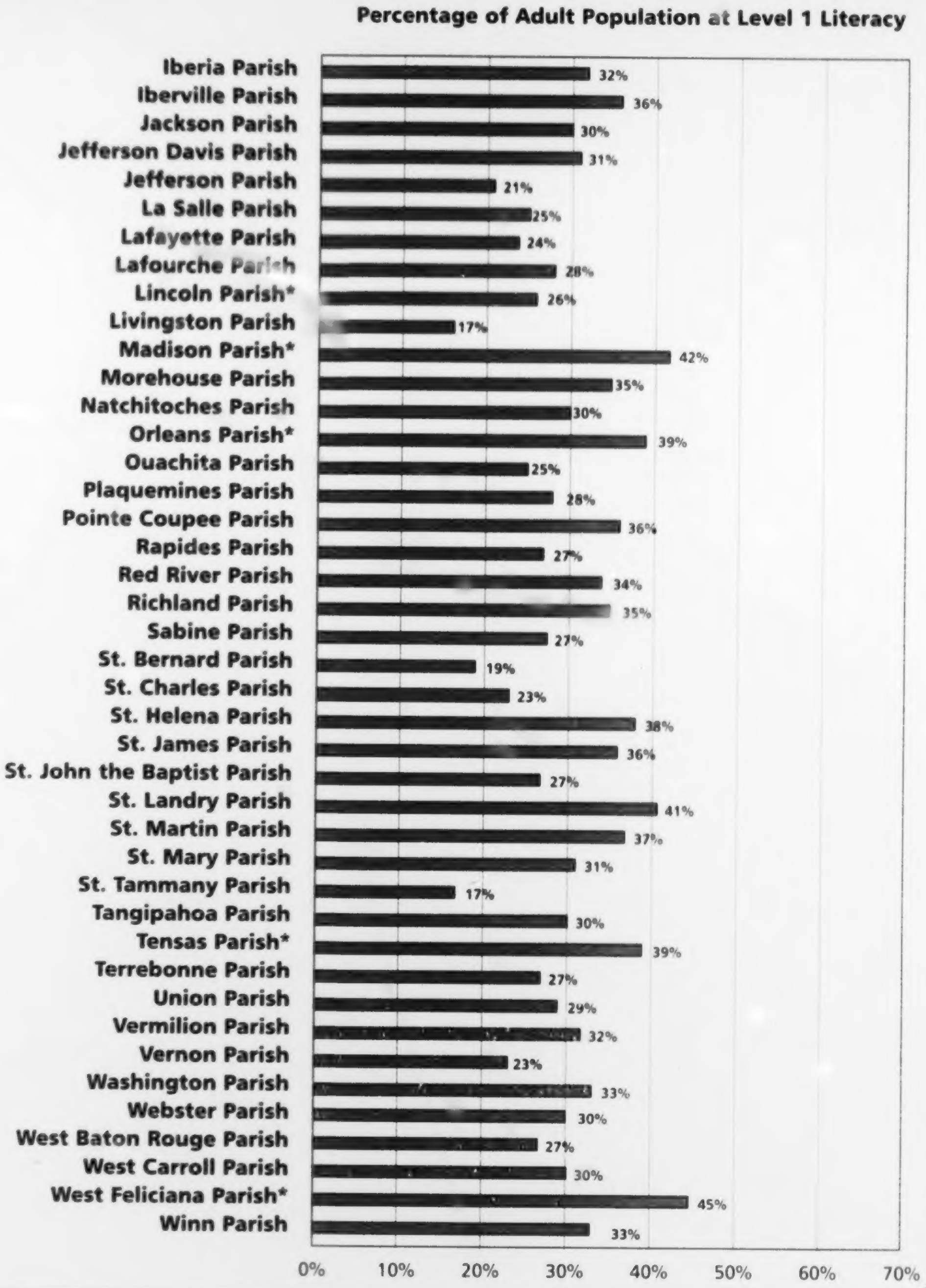
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



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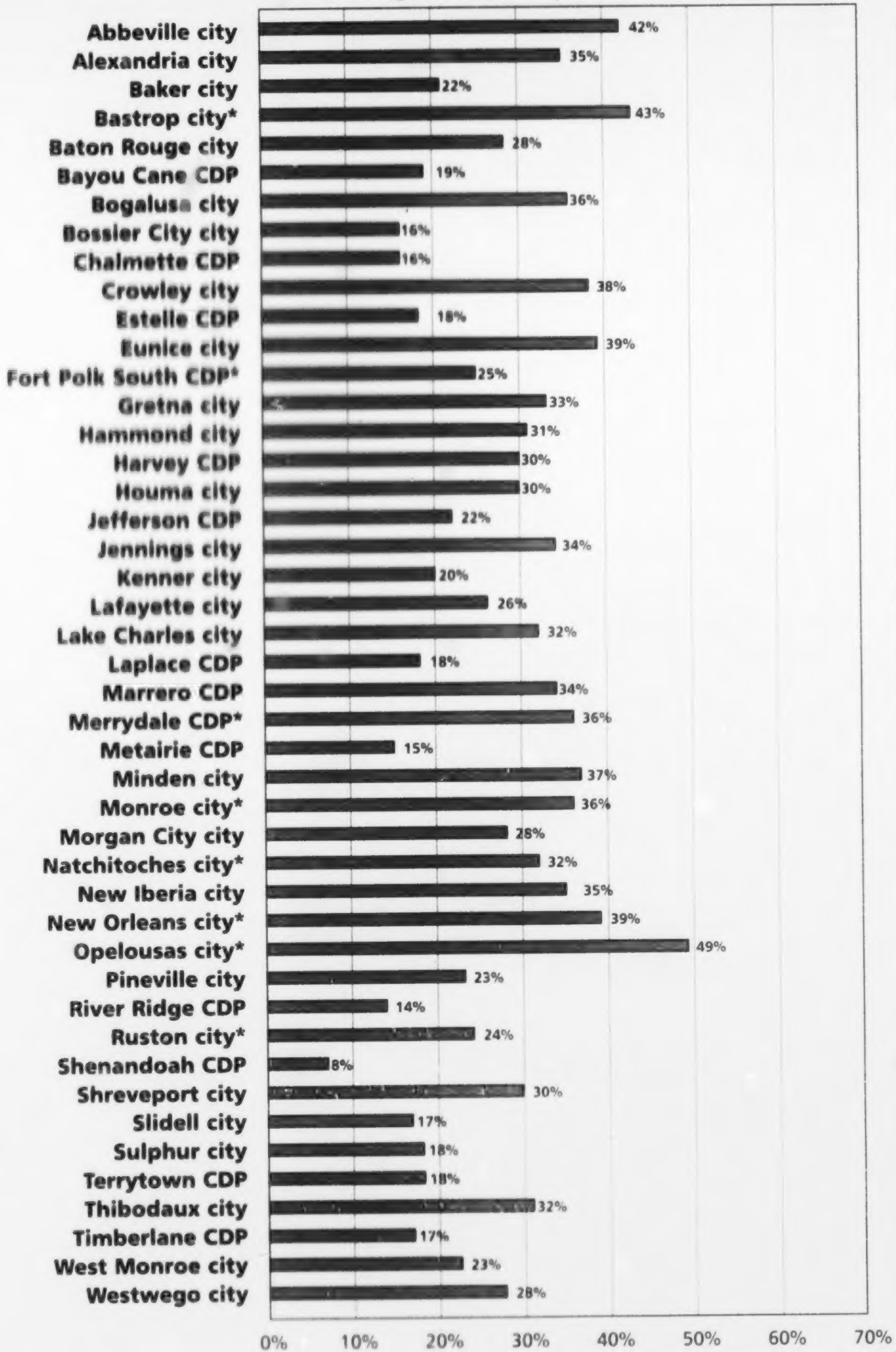
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (with adult populations of at least 5,000)



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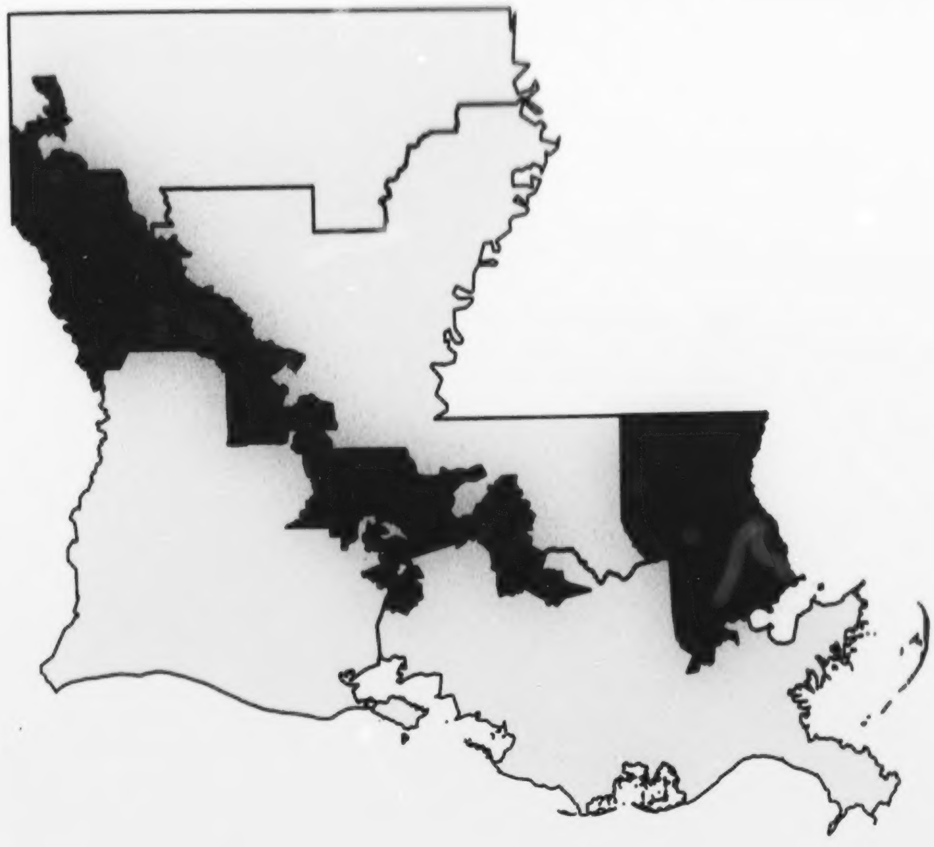
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Louisiana

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

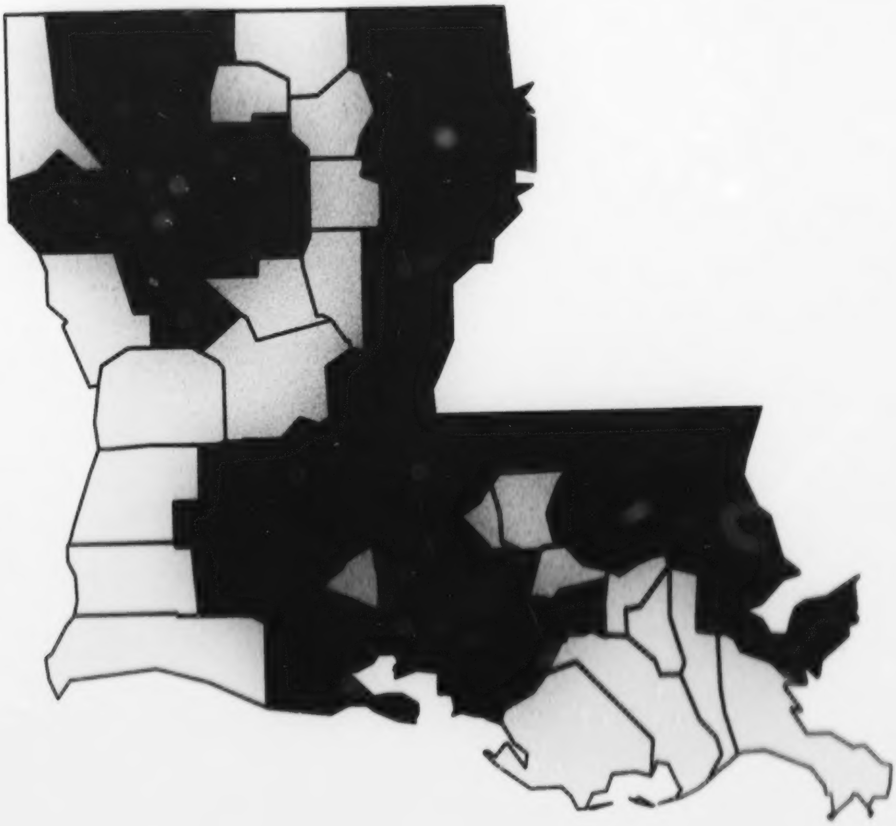
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Louisiana

## Level 1 Adult Literacy Rates, by County



Percentage of adult population
with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ☐ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| ☐ | no estimate available | (14) |

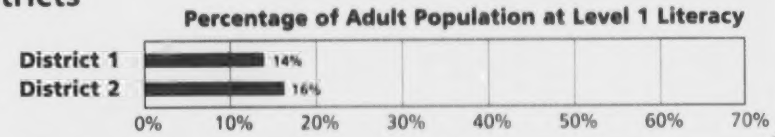
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

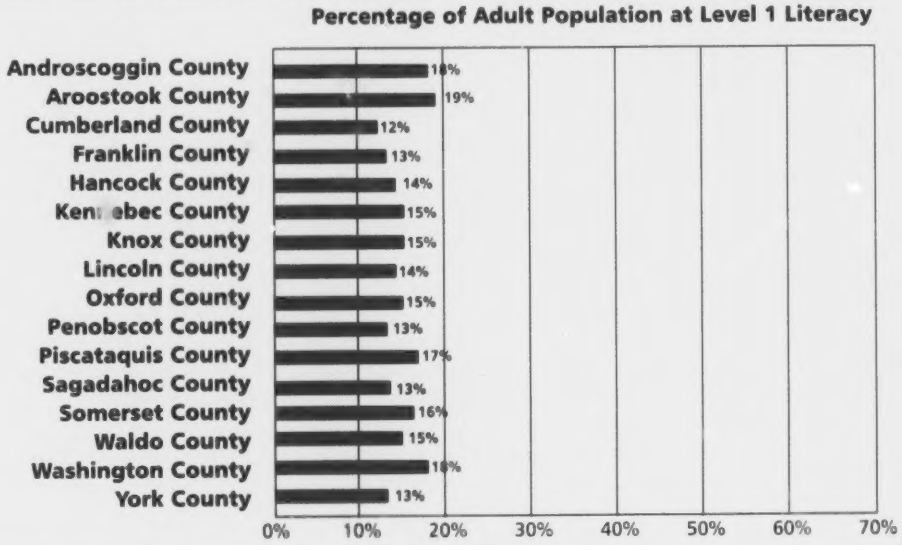
# Maine

## 15% of adult population is at Level 1 Literacy

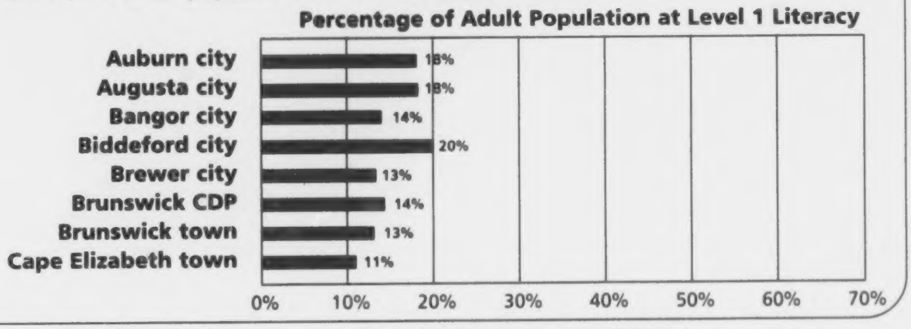
### Congressional Districts



### Counties (with adult populations of at least 5,000)



### Municipalities (with adult populations of at least 5,000)



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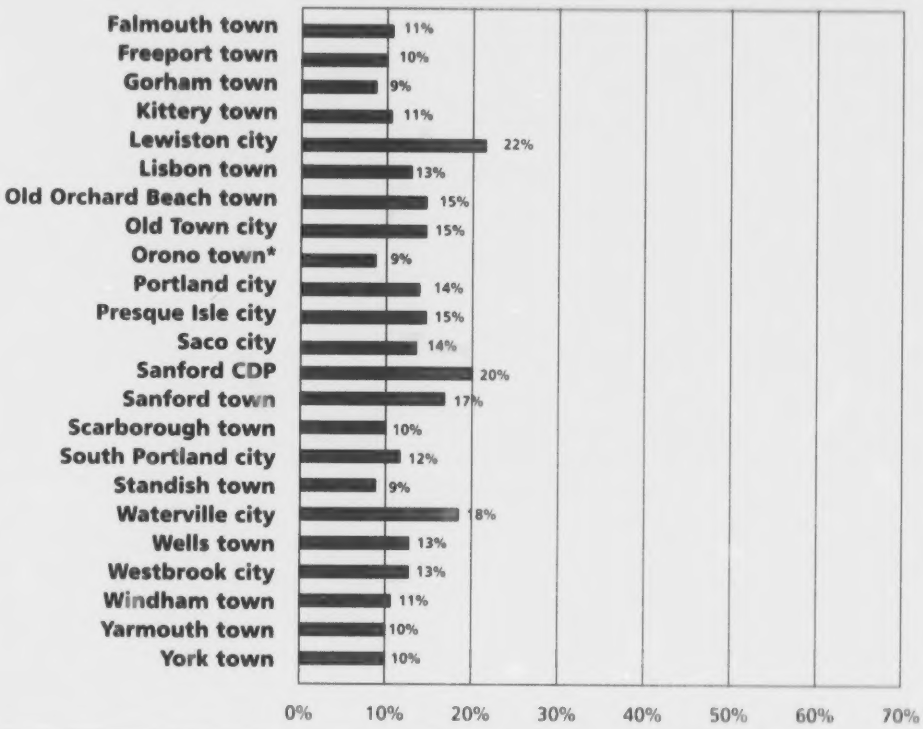
## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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# The State of Literacy in America: Maine

## Level 1 Adult Literacy Rates, by Congressional District

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

Percentage of adult population with Level 1 Literacy skills

- ■ 30% or greater (1)
- □ 20% to 30% (1)
- ■ 15% to 20% (1)
- ■ 10% to 15% (4)
- ■ 10% or less (6)
- □ no estimate available (14)

# The State of Literacy in America: Maine

## Level 1 Adult Literacy Rates, by County

Percentage of adult population with Level 1 Literacy skills

- ■ 30% or greater (1)
- □ 20% to 30% (1)
- ■ 15% to 20% (1)
- ■ 10% to 15% (4)
- ■ 10% or less (6)
- □ no estimate available (14)

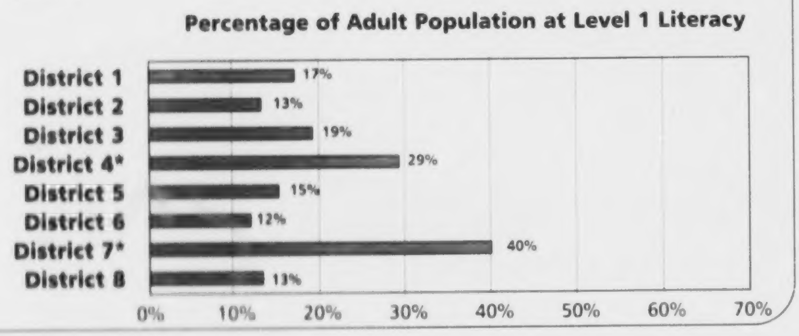
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

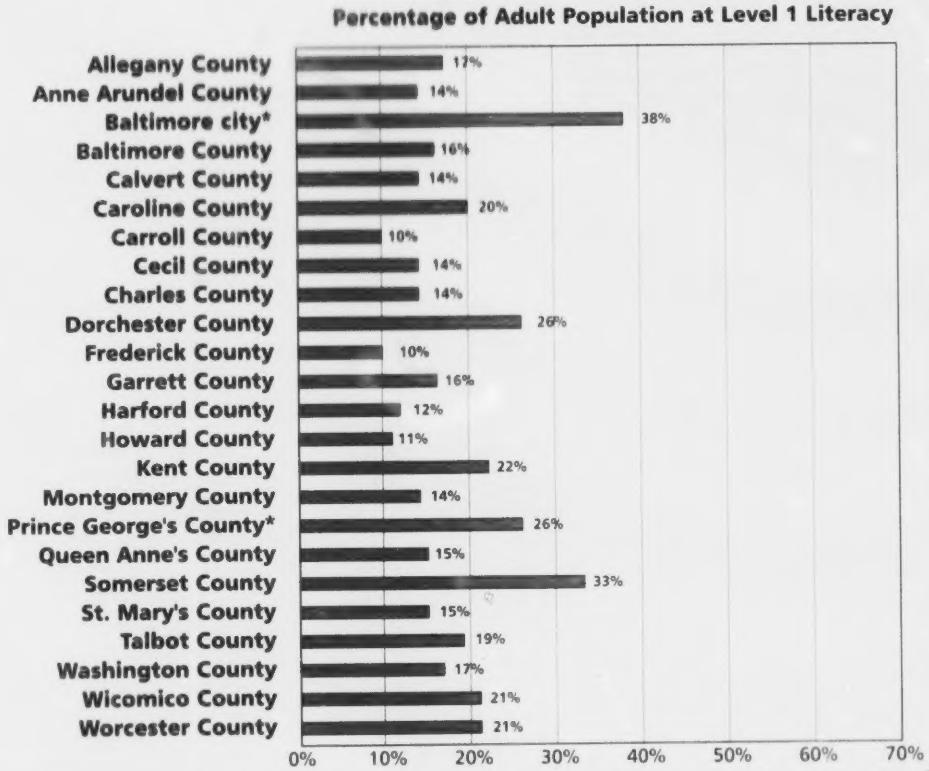
# Maryland

## 20% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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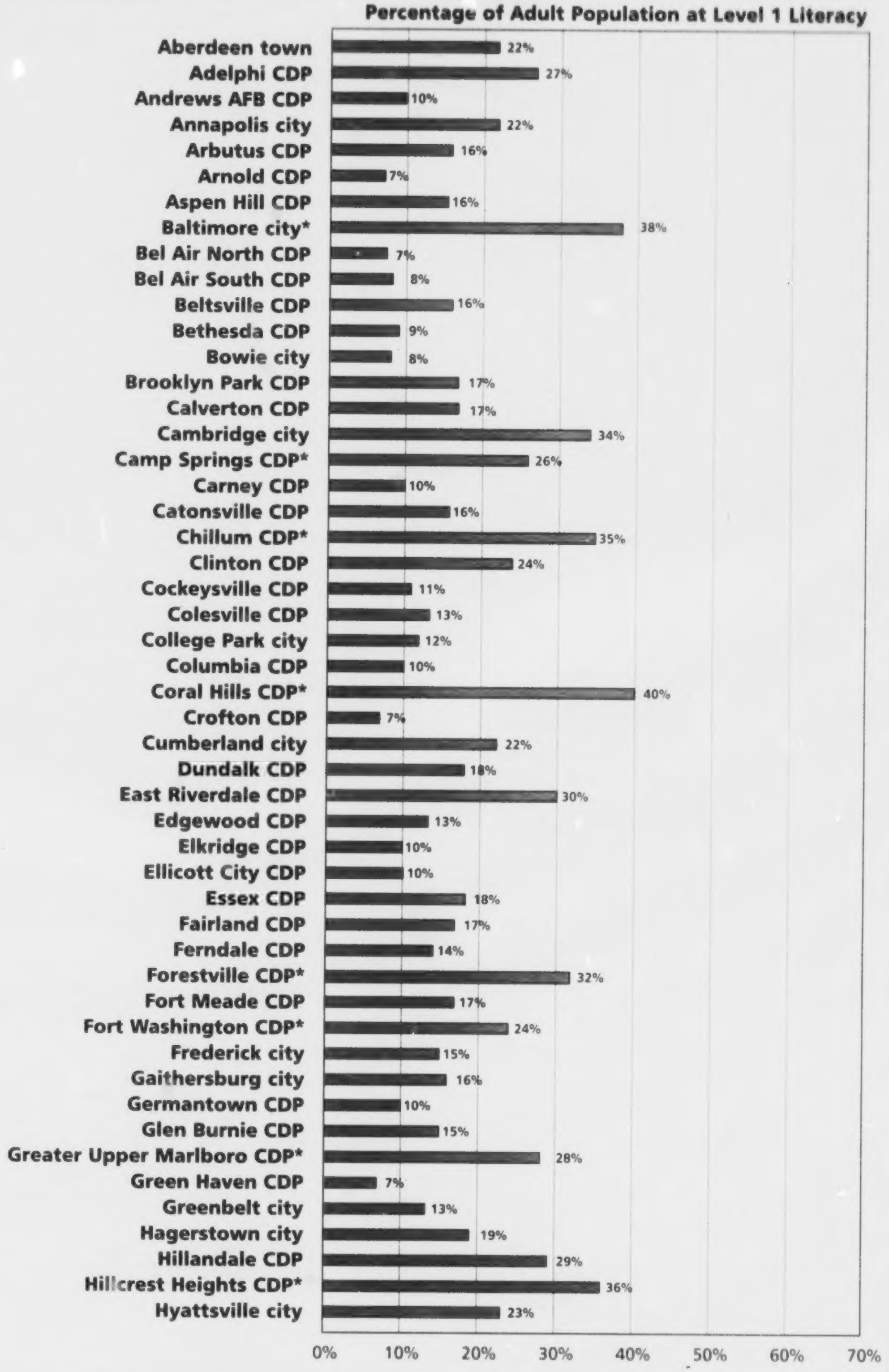
## Municipalities (with adult populations of at least 5,000)



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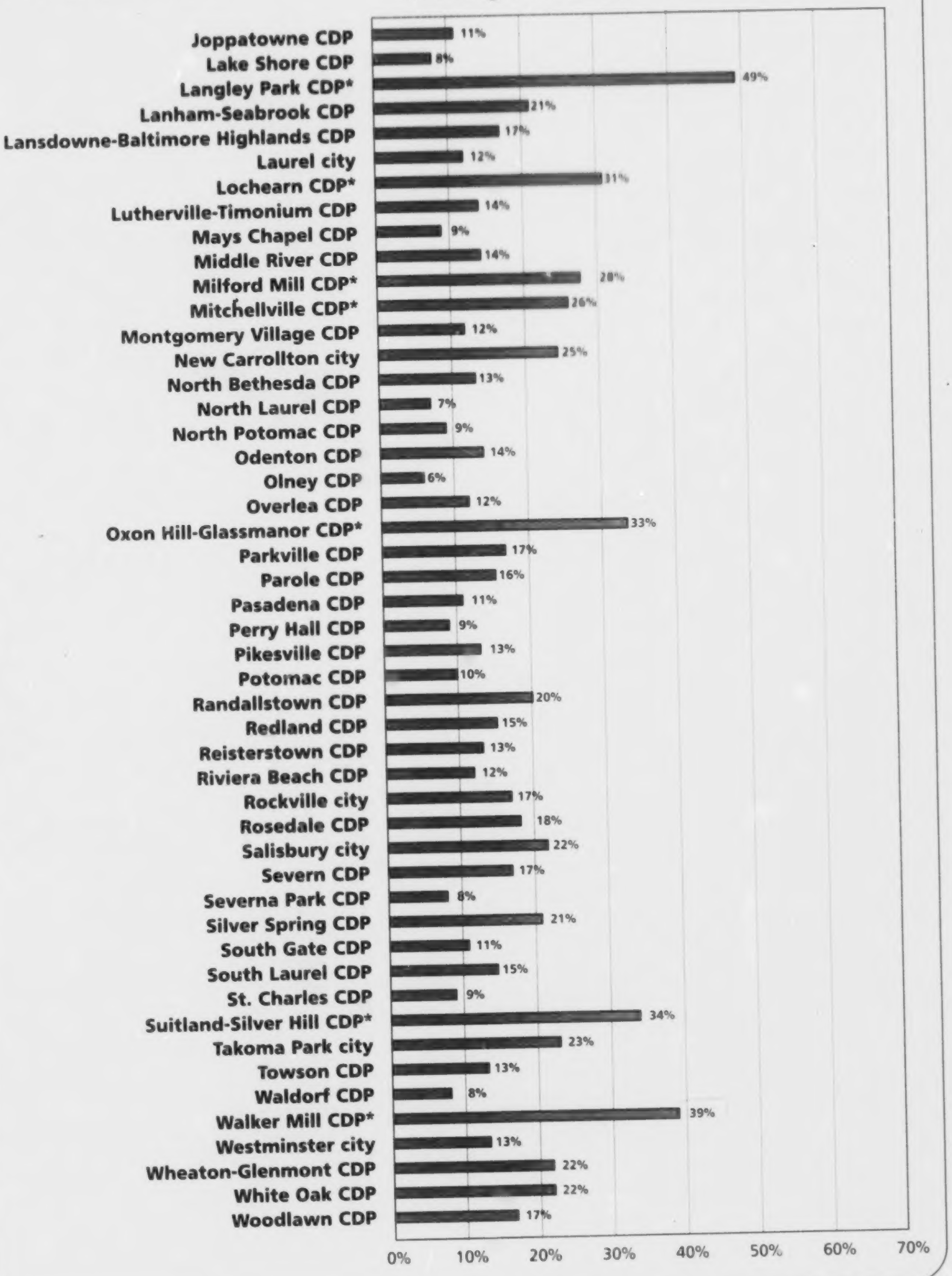
## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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# The State of Literacy in America: Maryland

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

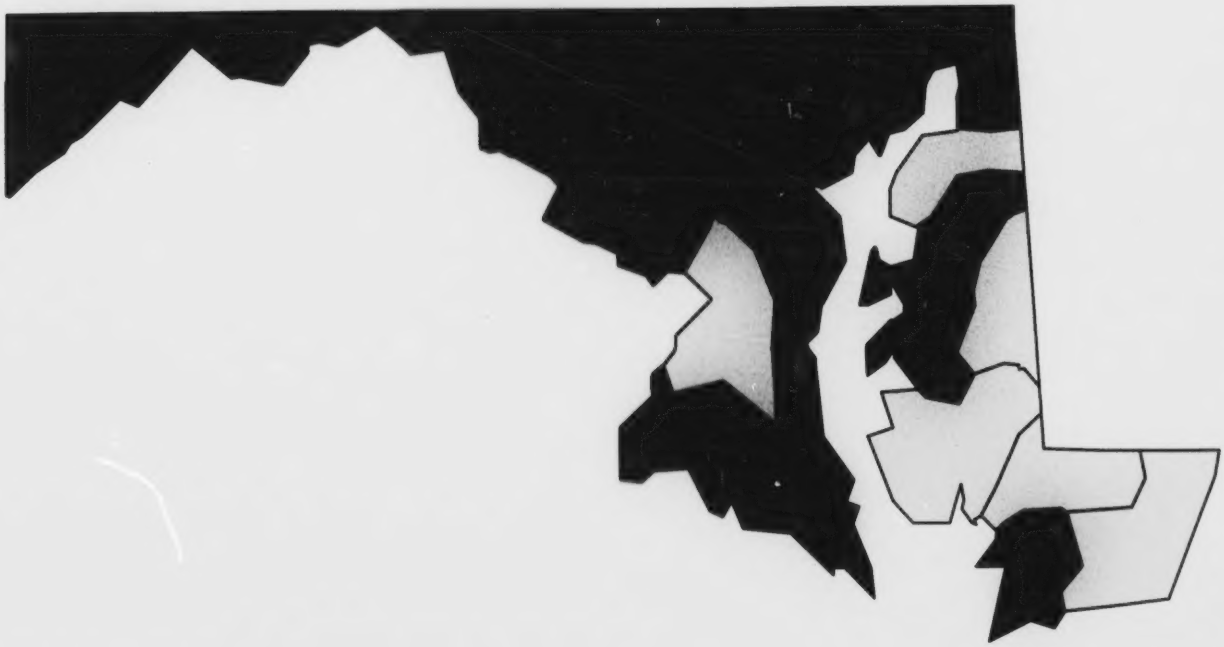
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Maryland

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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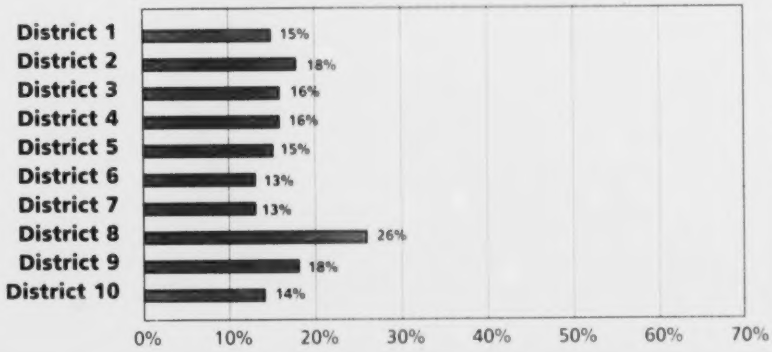
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# Massachusetts

## 16% of adult population is at Level 1 Literacy

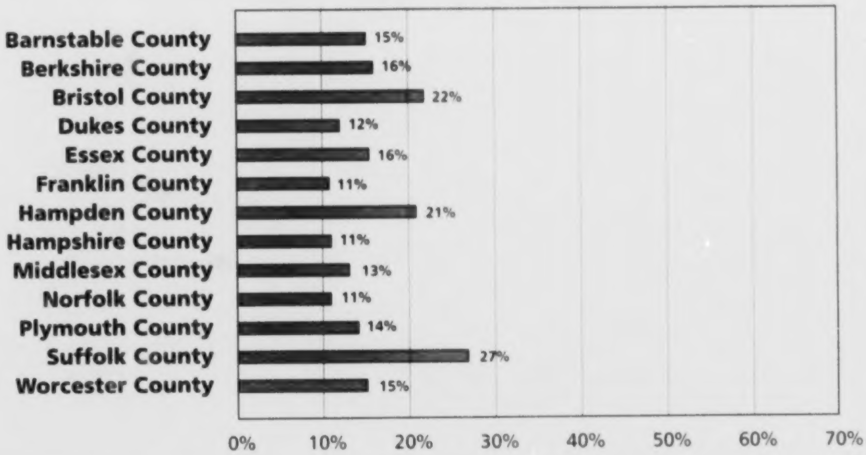
### Congressional Districts

Percentage of Adult Population at Level 1 Literacy



### Counties (with adult populations of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



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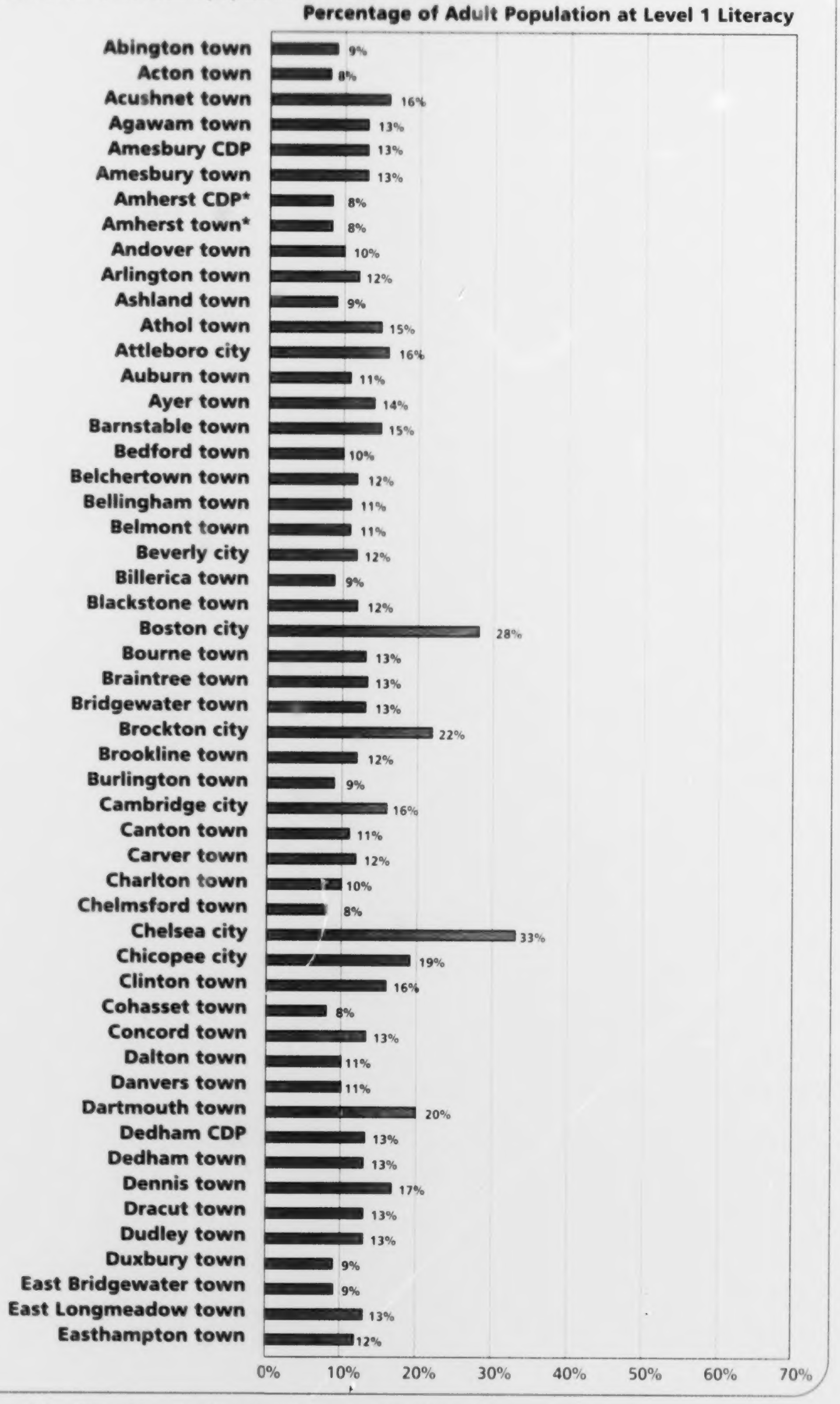
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

**Massachusetts**

## Municipalities (with adult populations of at least 5,000)



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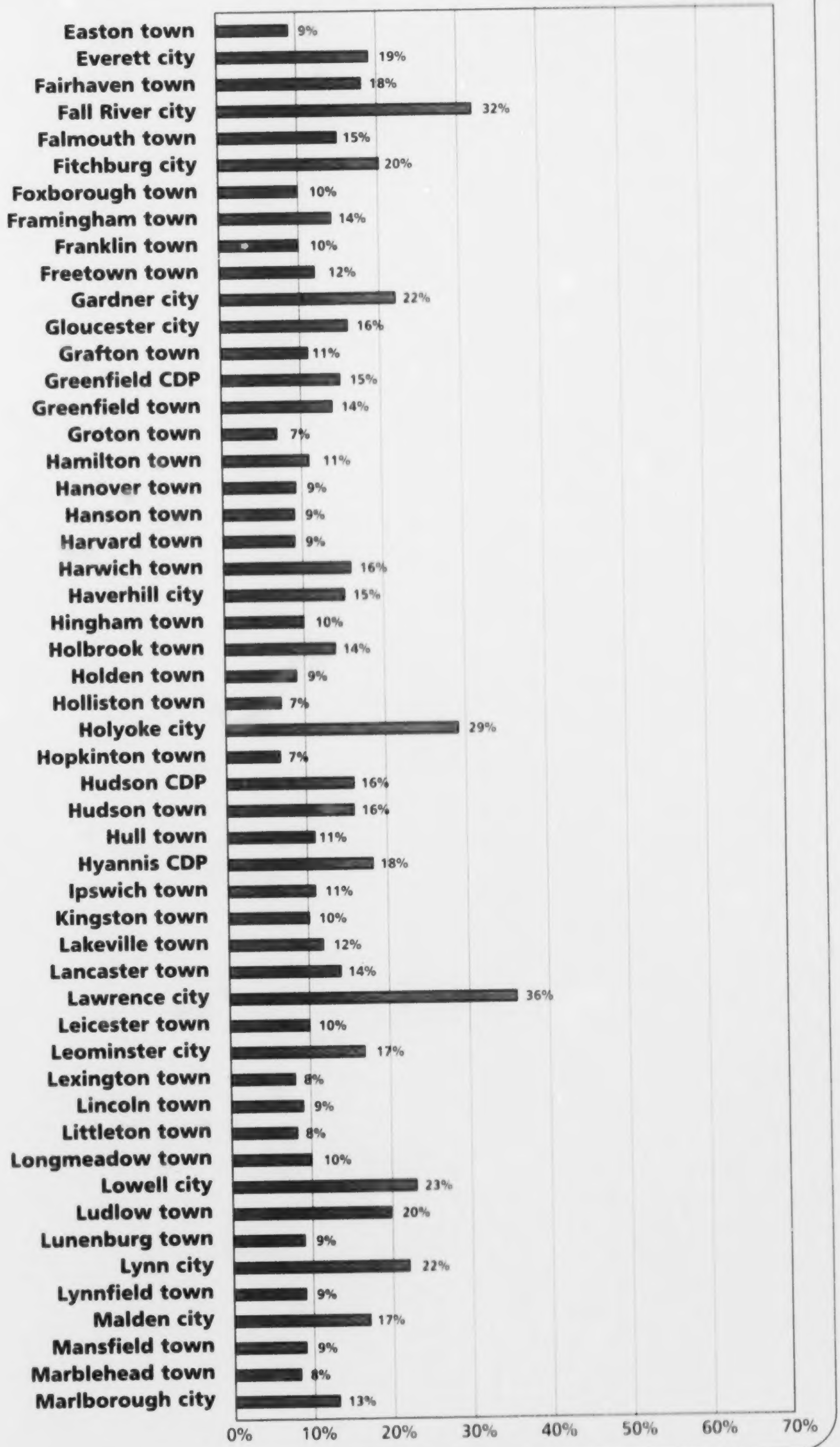
## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

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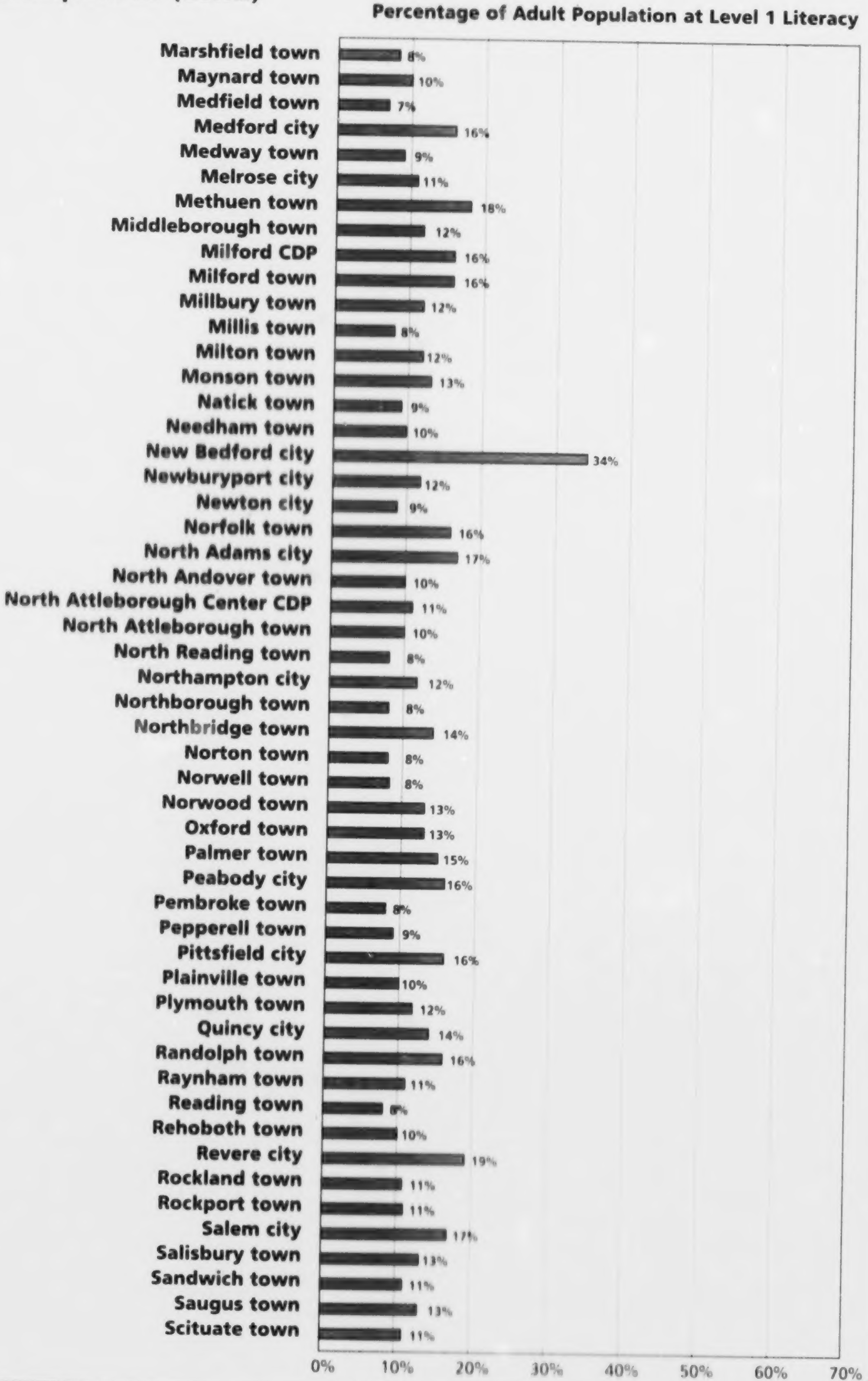
## Municipalities (cont.)



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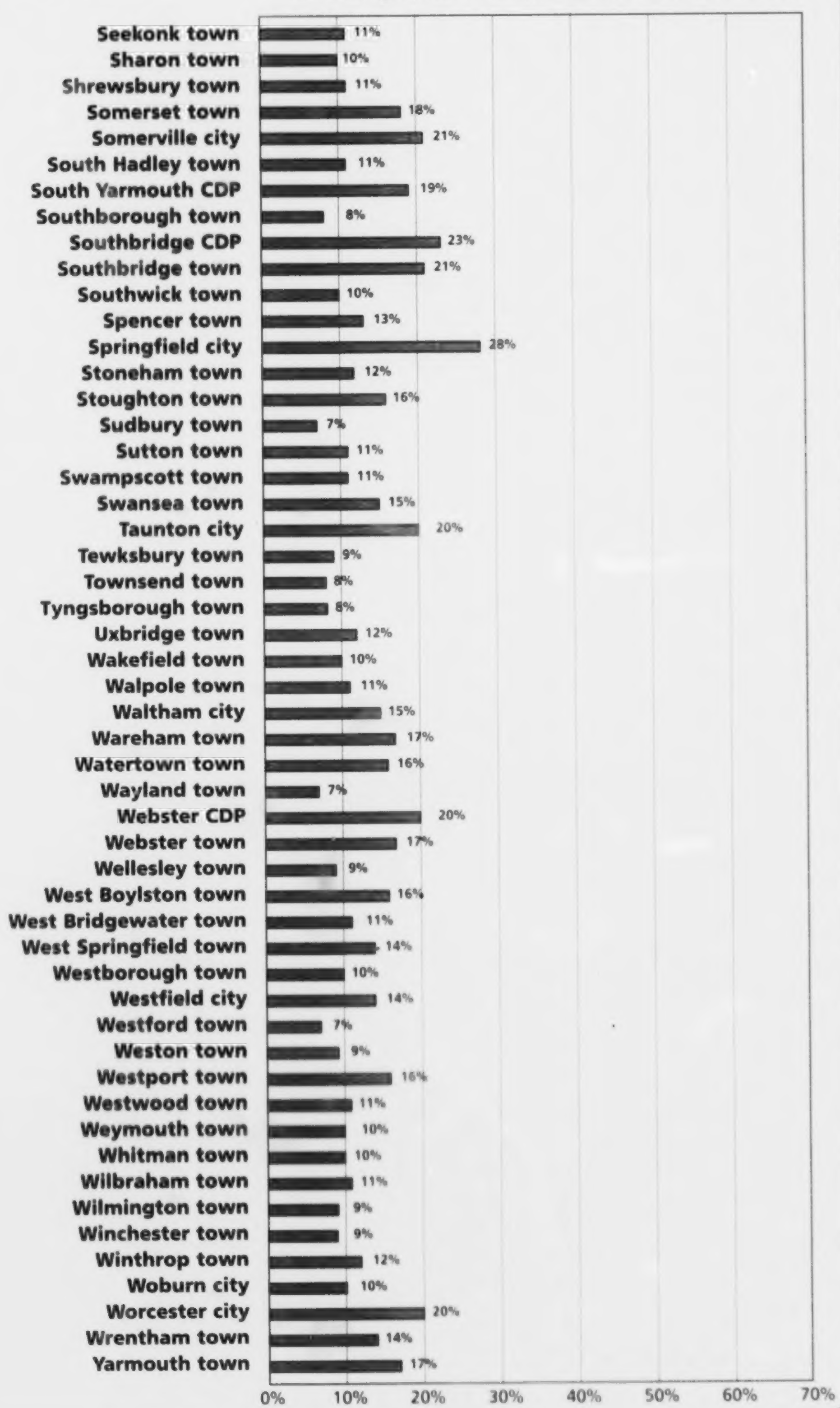
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America:Massachusetts

## Level 1 Adult Literacy Rates, by Congressional District

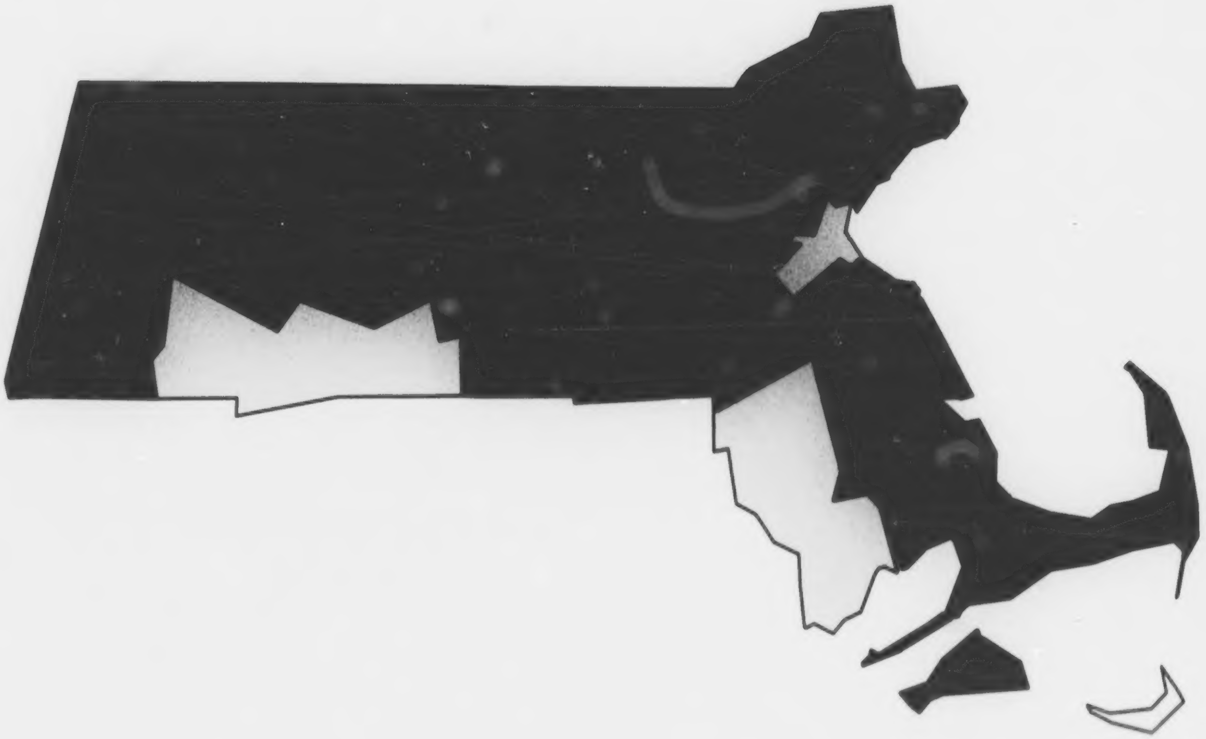
Percentage of adult population
with Level 1 Literacy skills
■ 30% or greater (1)
□ 20% to 30% (1)
■ 15% to 20% (1)
■ 10% to 15% (4)
■ 10% or less (6)
□ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Massachusetts

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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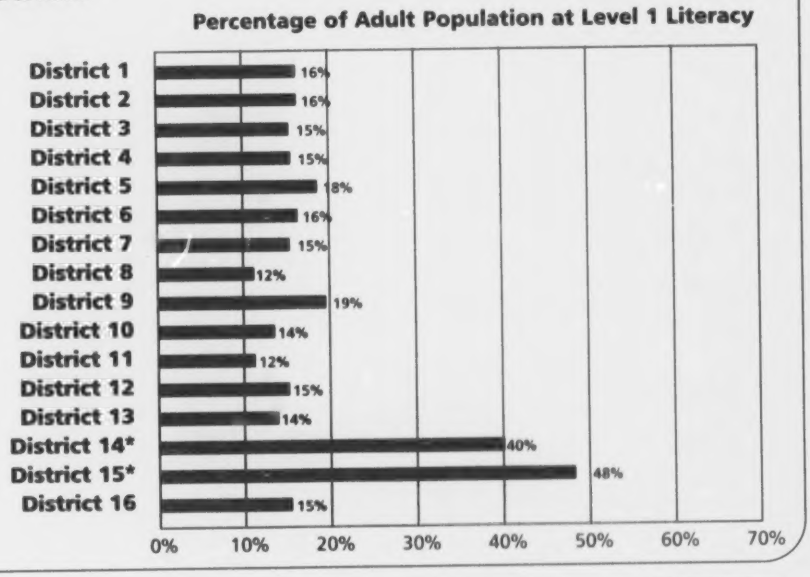
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

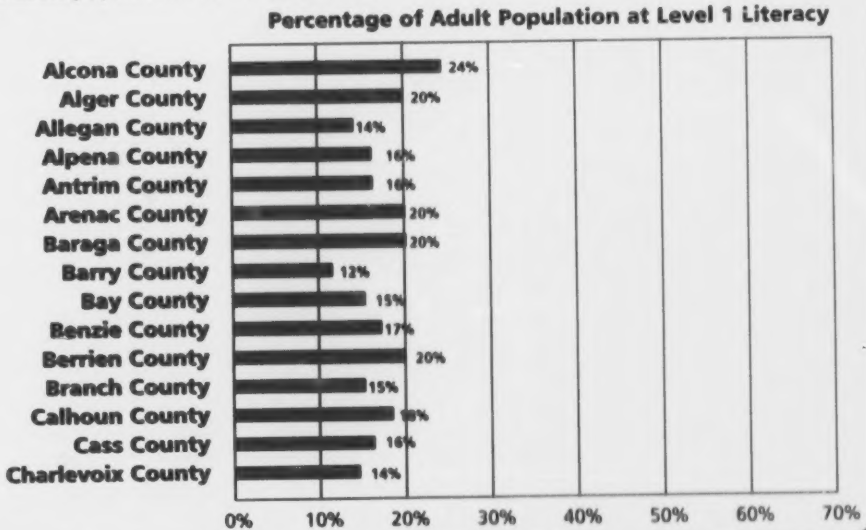
# Michigan

## 18% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

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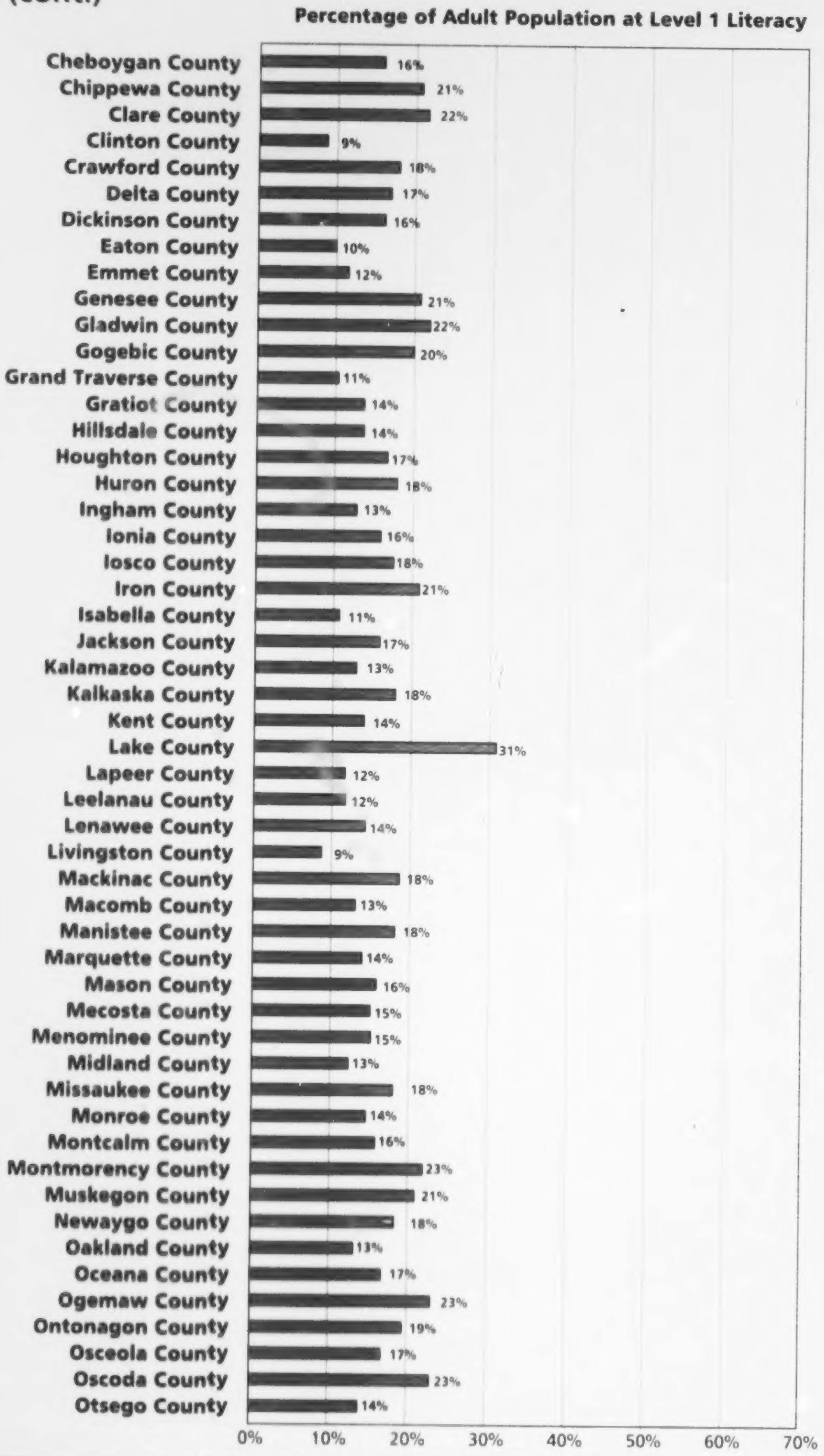
**Michigan**

## Counties (cont.)


Percentage of Adult Population at Level 1 Literacy

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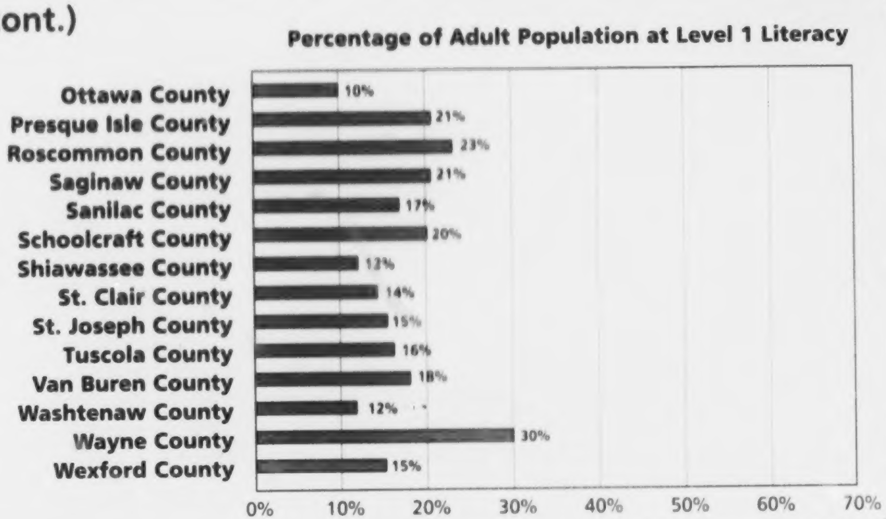
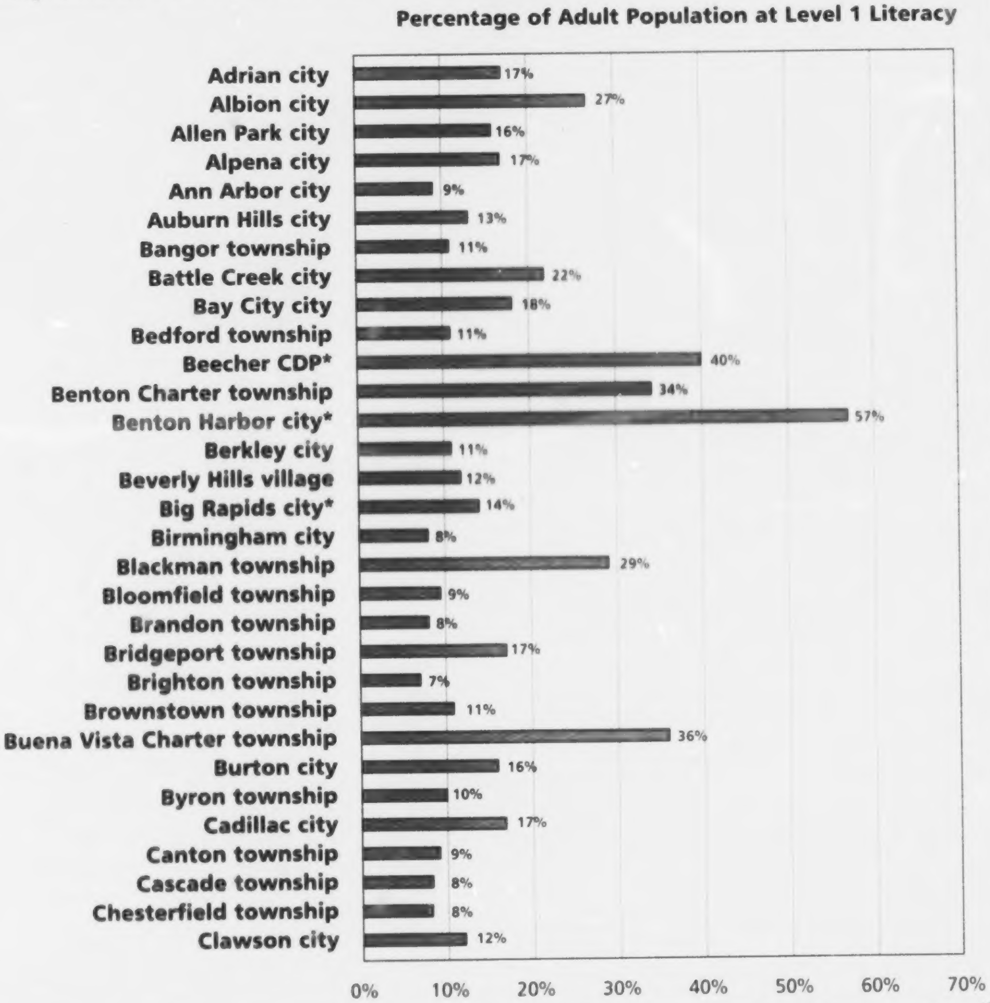
## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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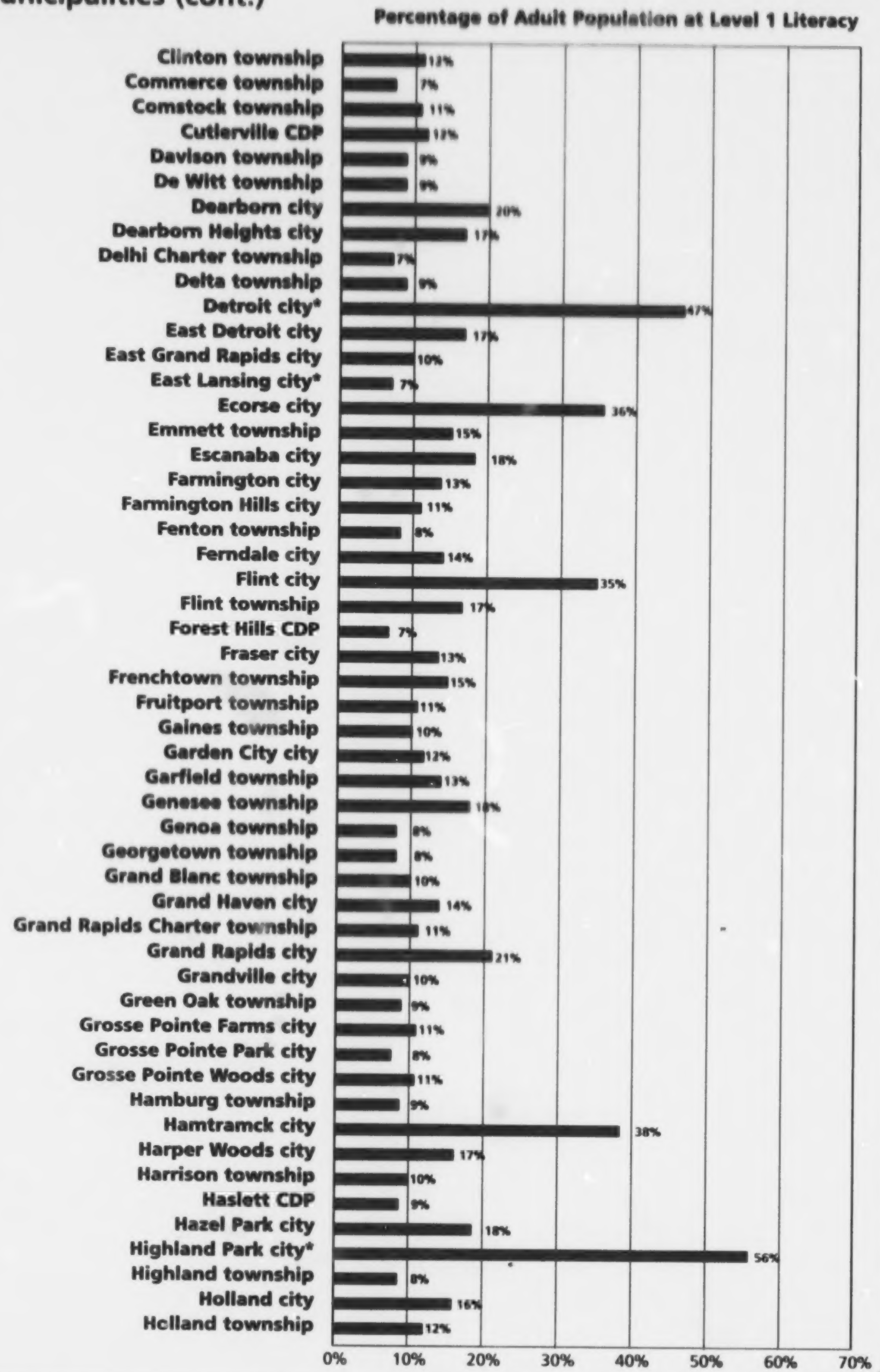
## Municipalities (cont.)



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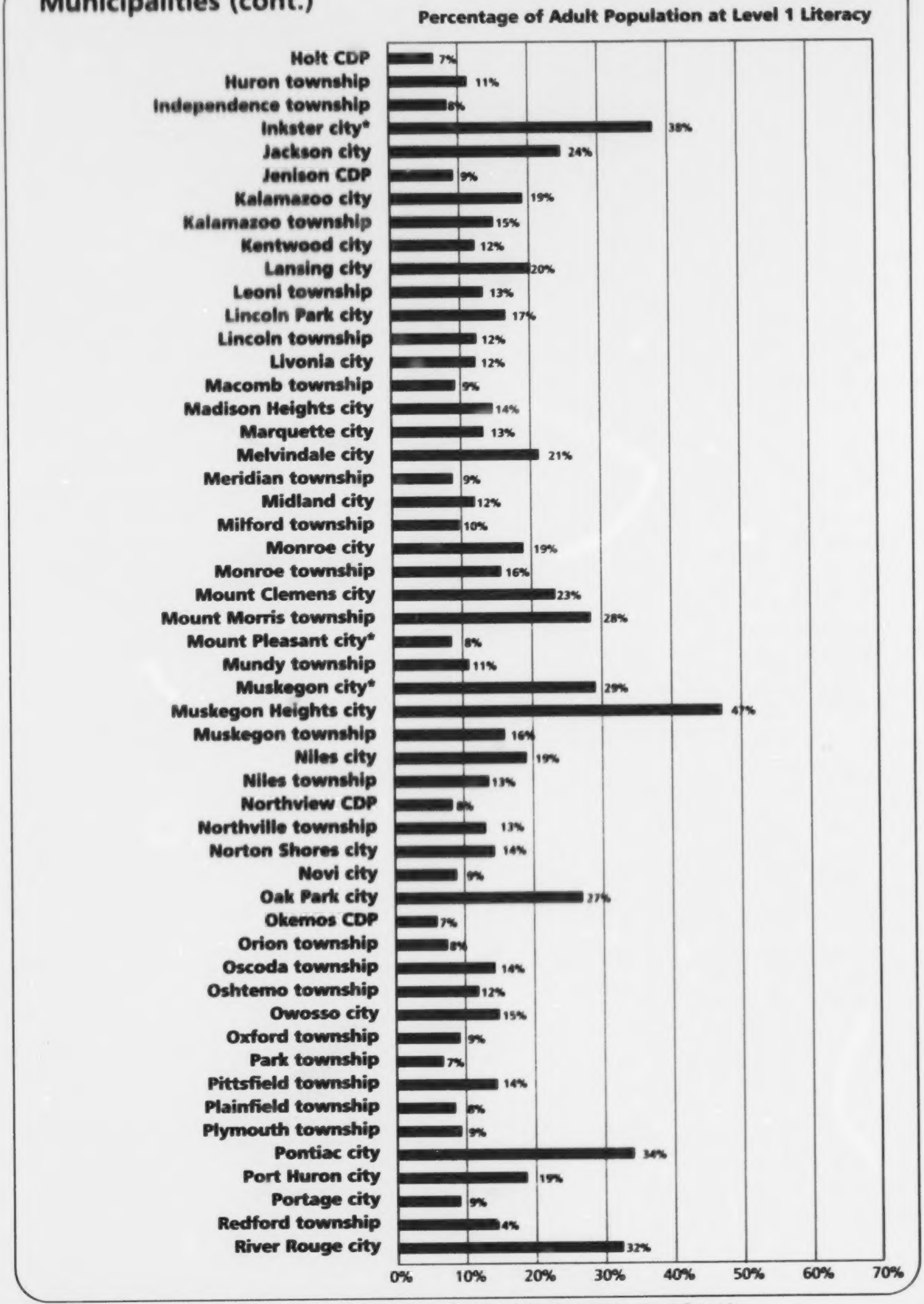
## Municipalities (cont.)



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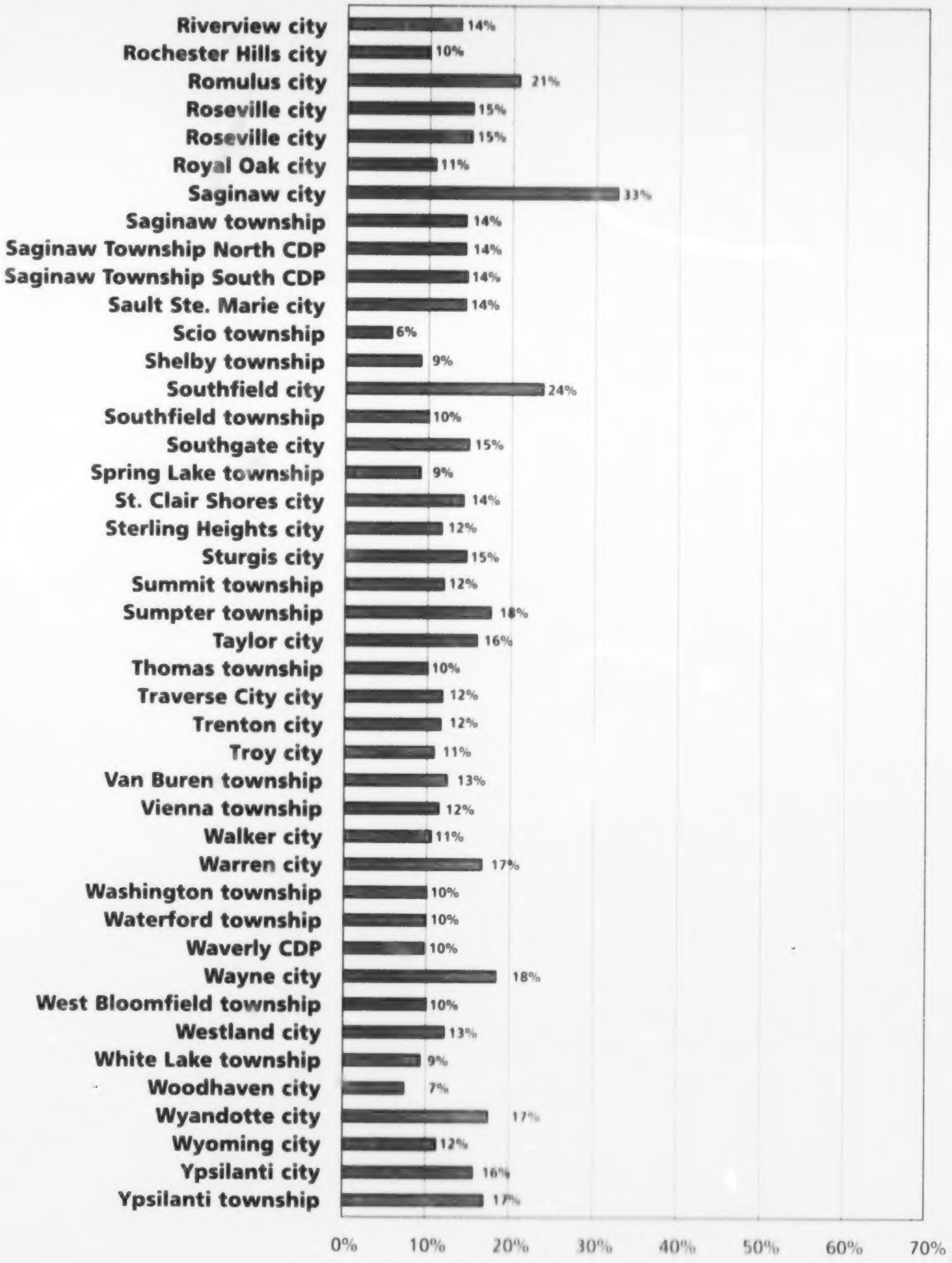
## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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# The State of Literacy in America: Michigan

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

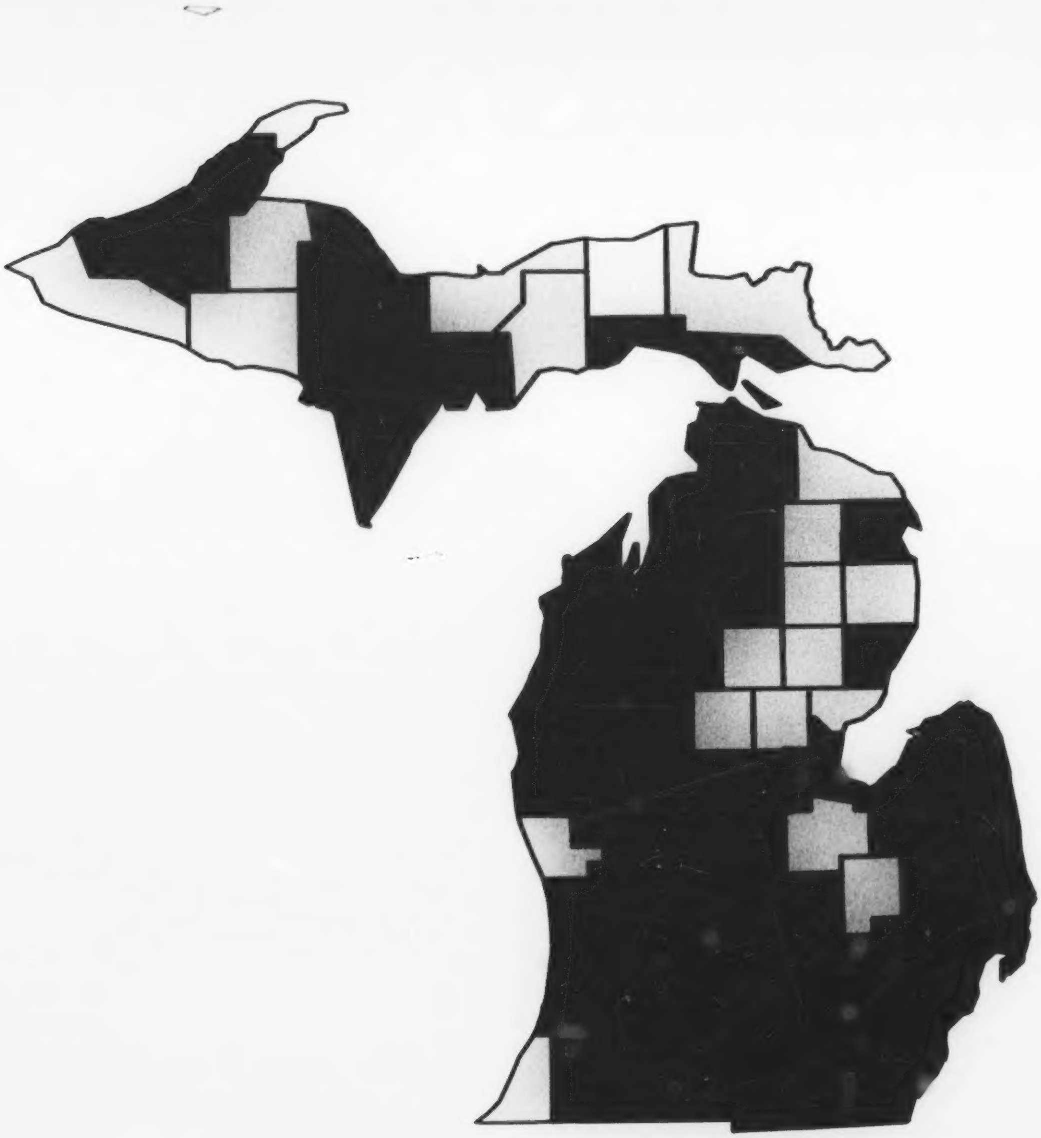
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Michigan

## Level 1 Adult Literacy Rates, by County



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Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

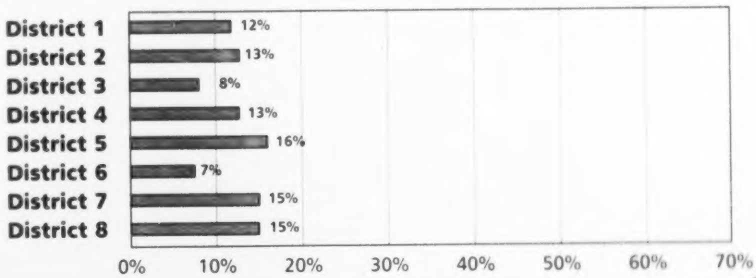
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

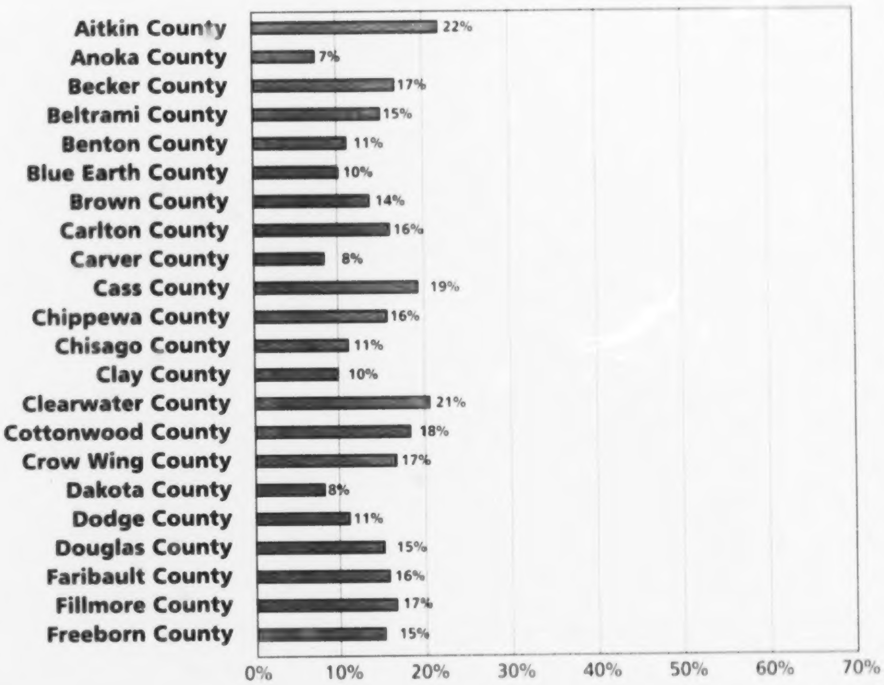
# Minnesota

## 13% of adult population is at Level 1 Literacy

## Congressional Districts


Percentage of Adult Population at Level 1 Literacy

## Counties (with adult population of at least 5,000)


Percentage of Adult Population at Level 1 Literacy

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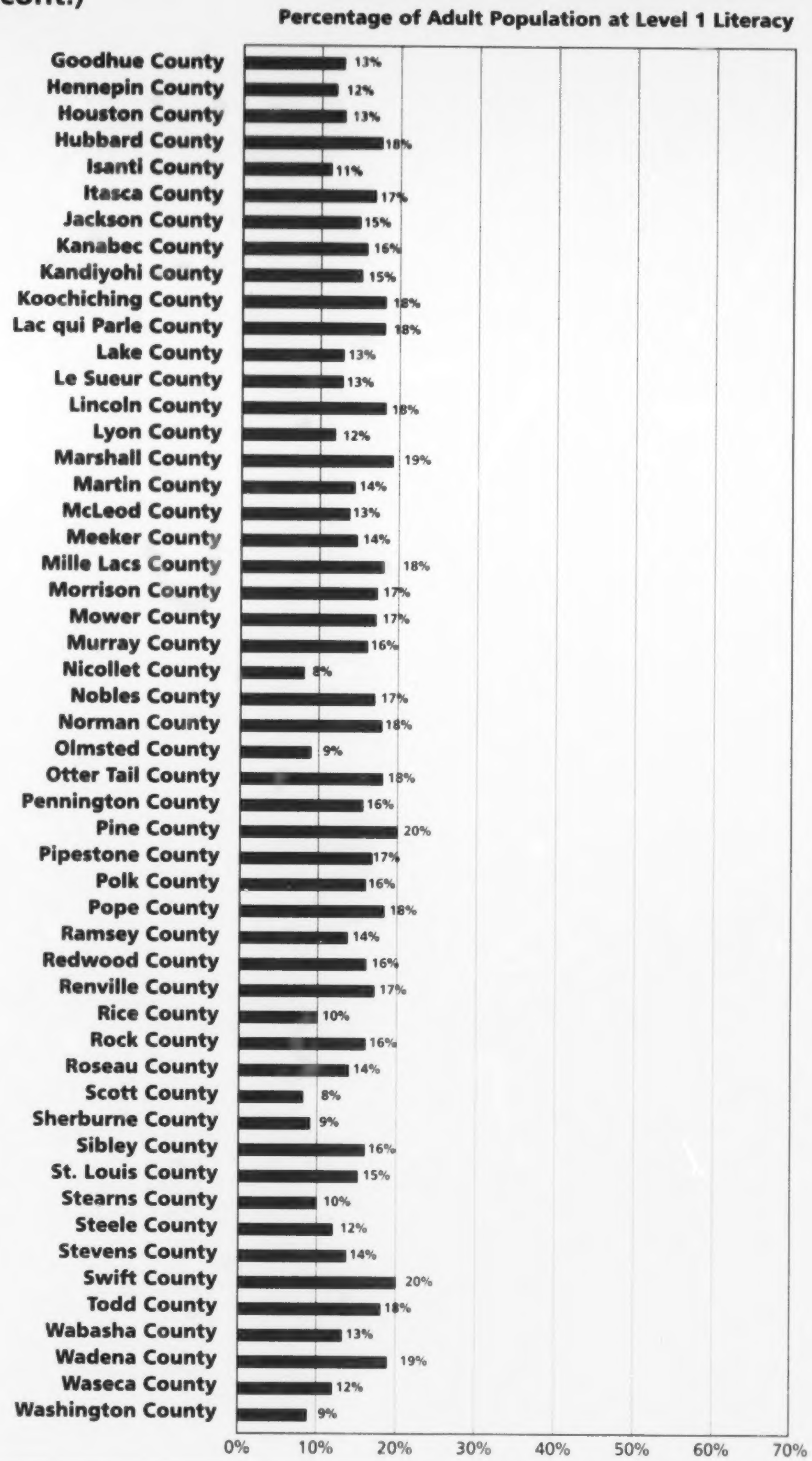
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



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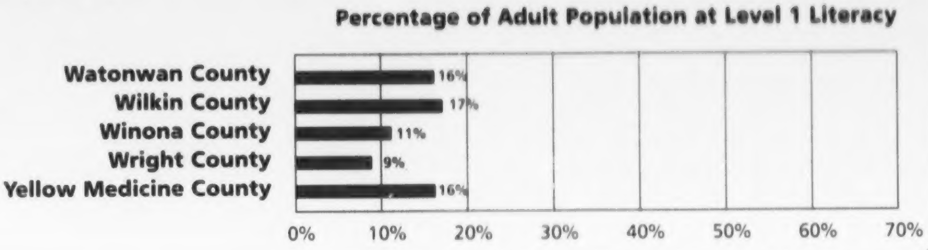
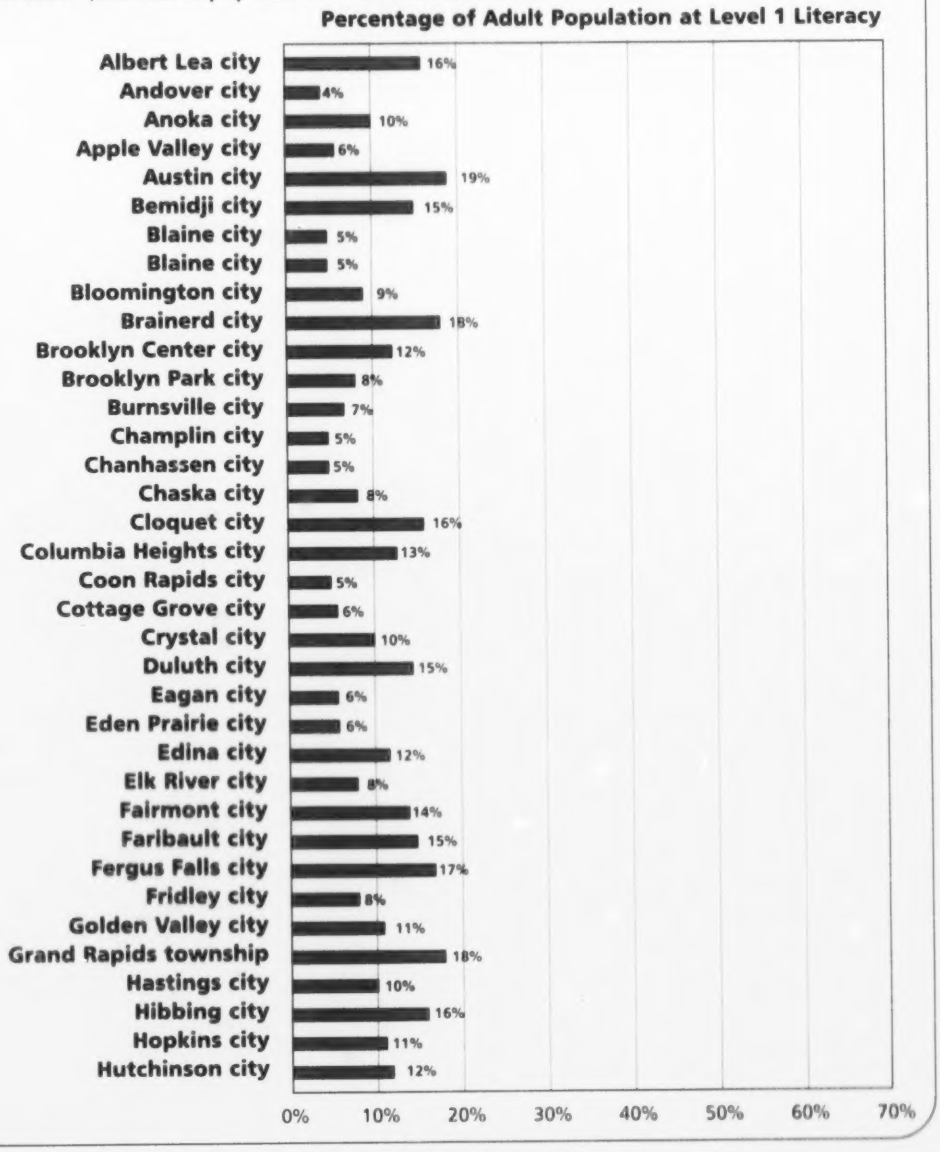
## Counties (cont.)



## Municipalities (with adult population of at least 5,000)



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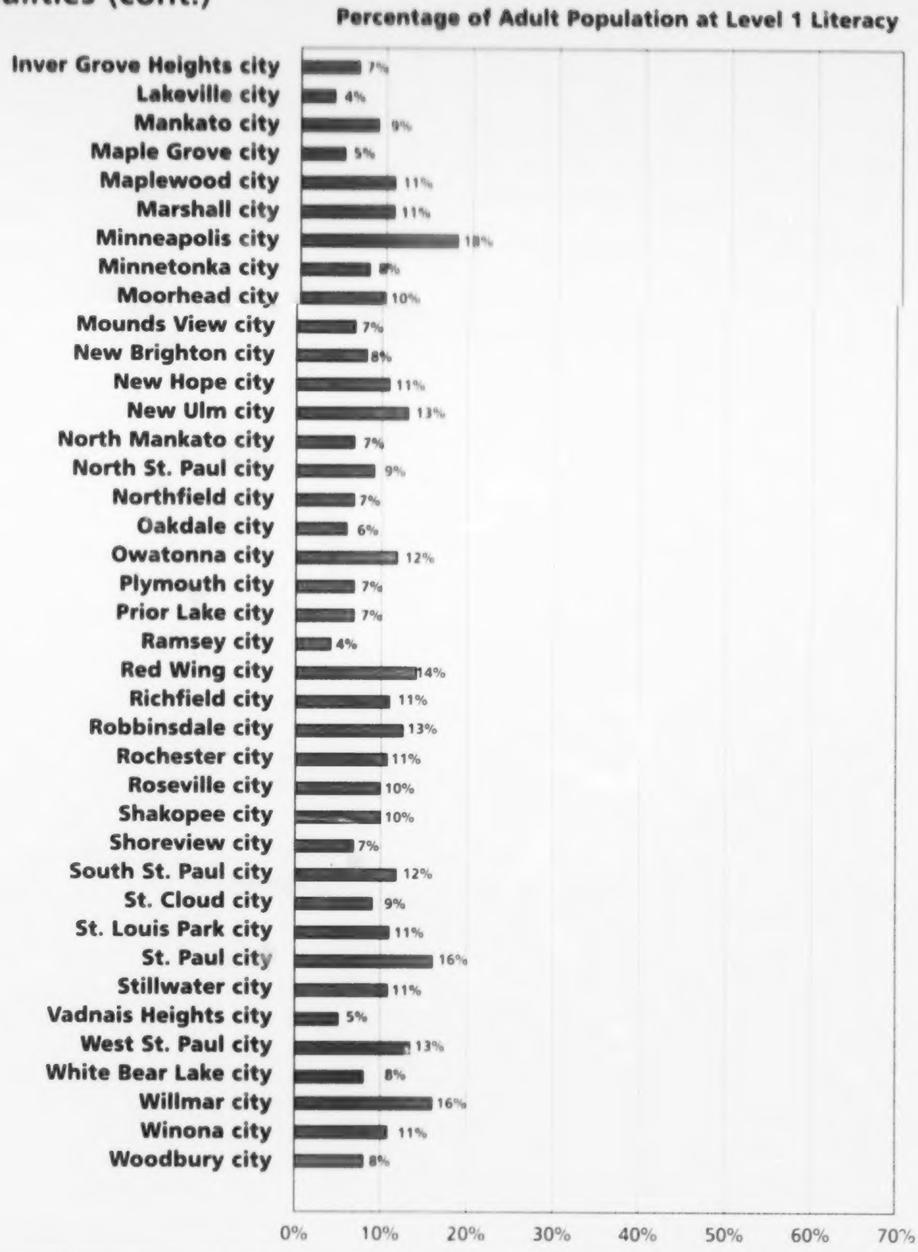
## Municipalities (cont.)



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# The State of Literacy in America: Minnesota

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

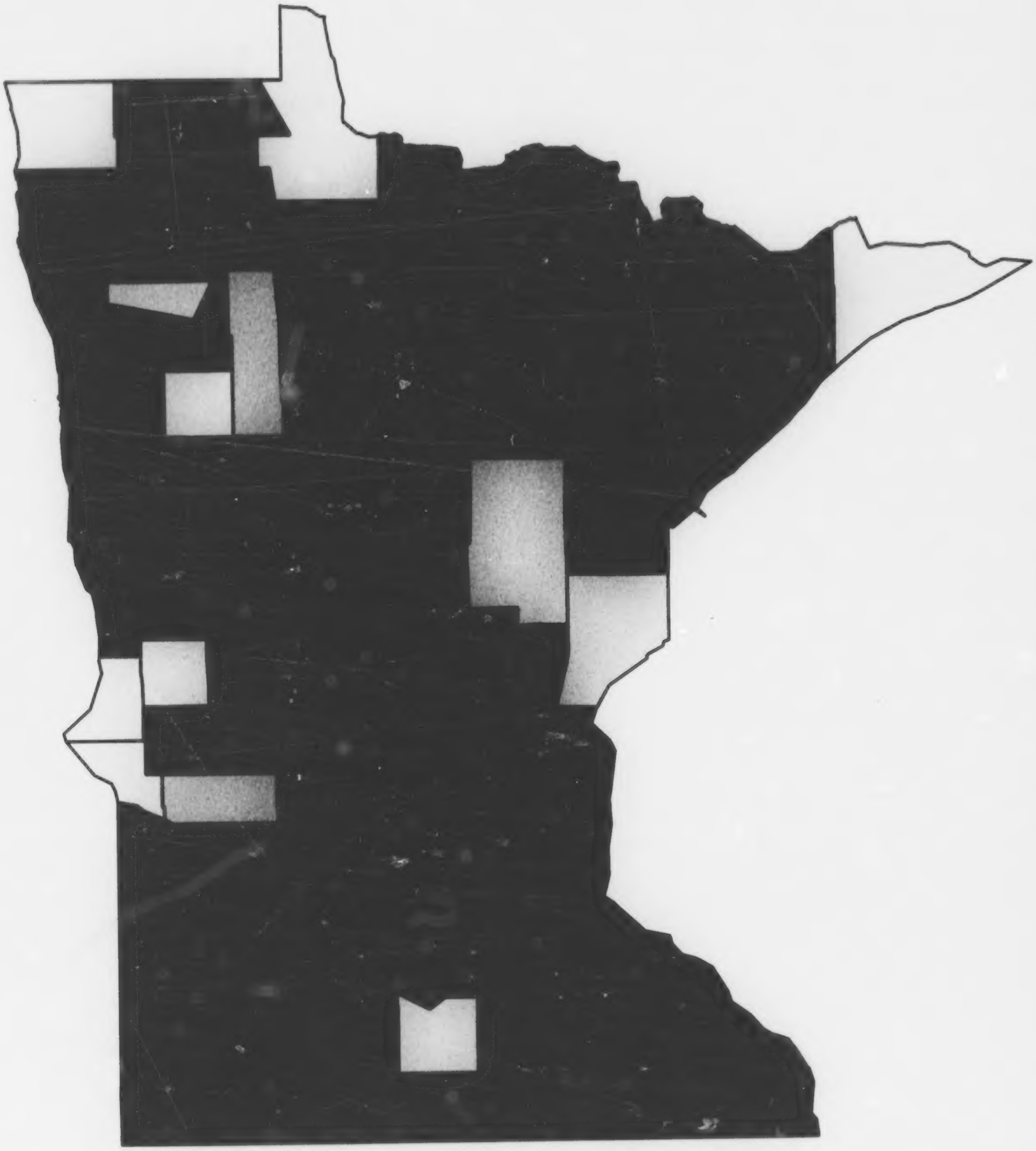
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Minnesota

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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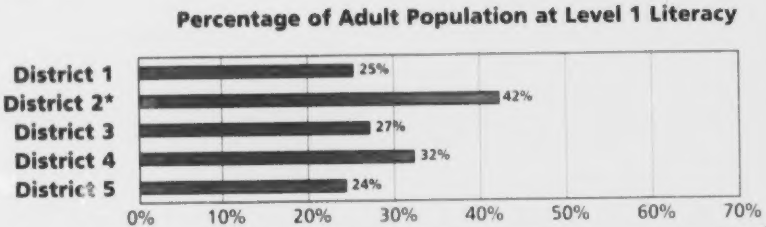
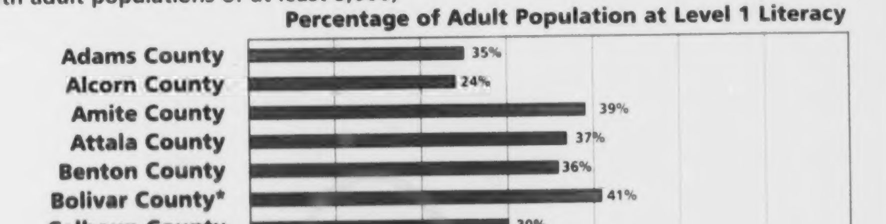
# Mississippi

## 30% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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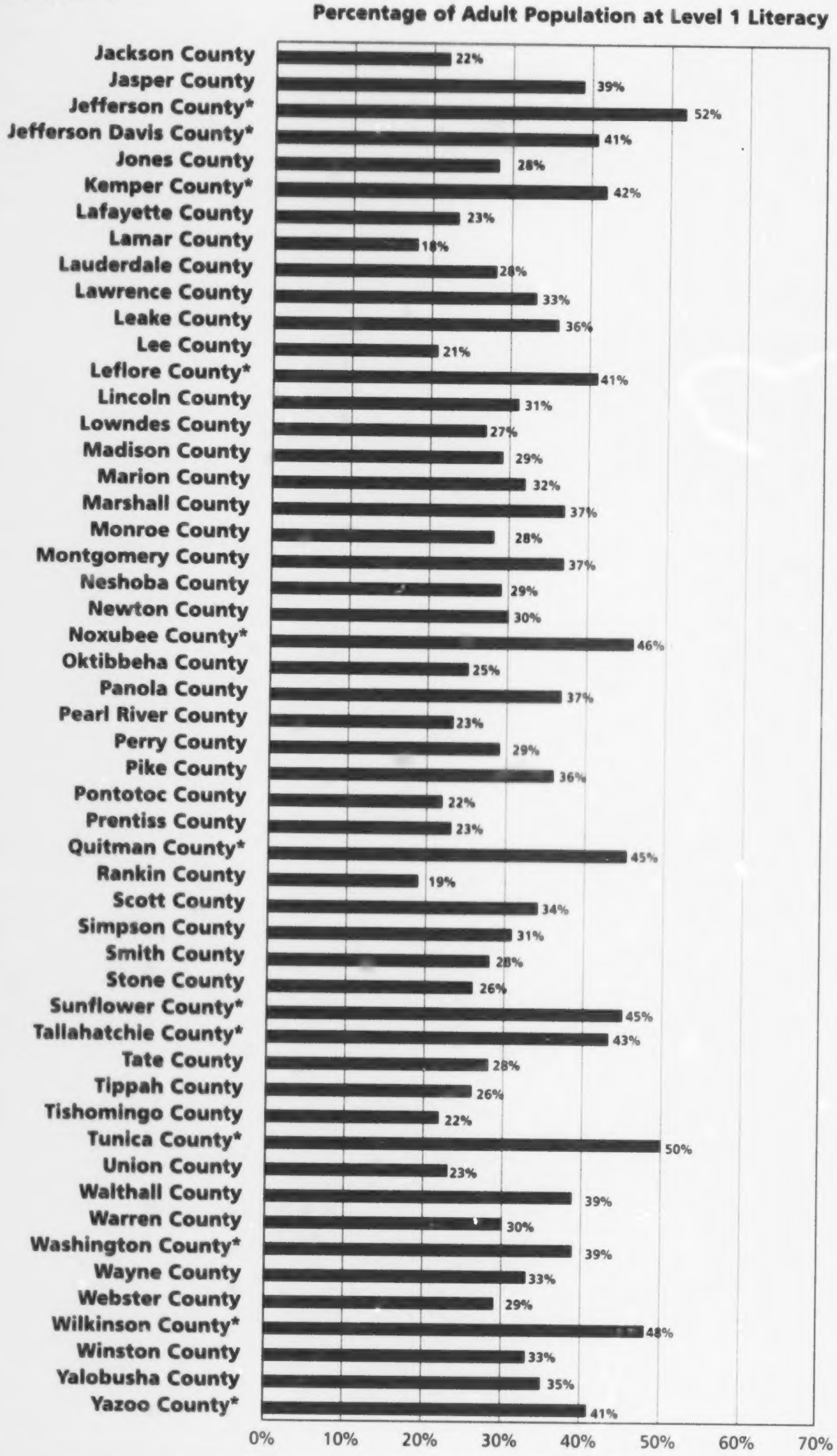
## Counties (cont.)



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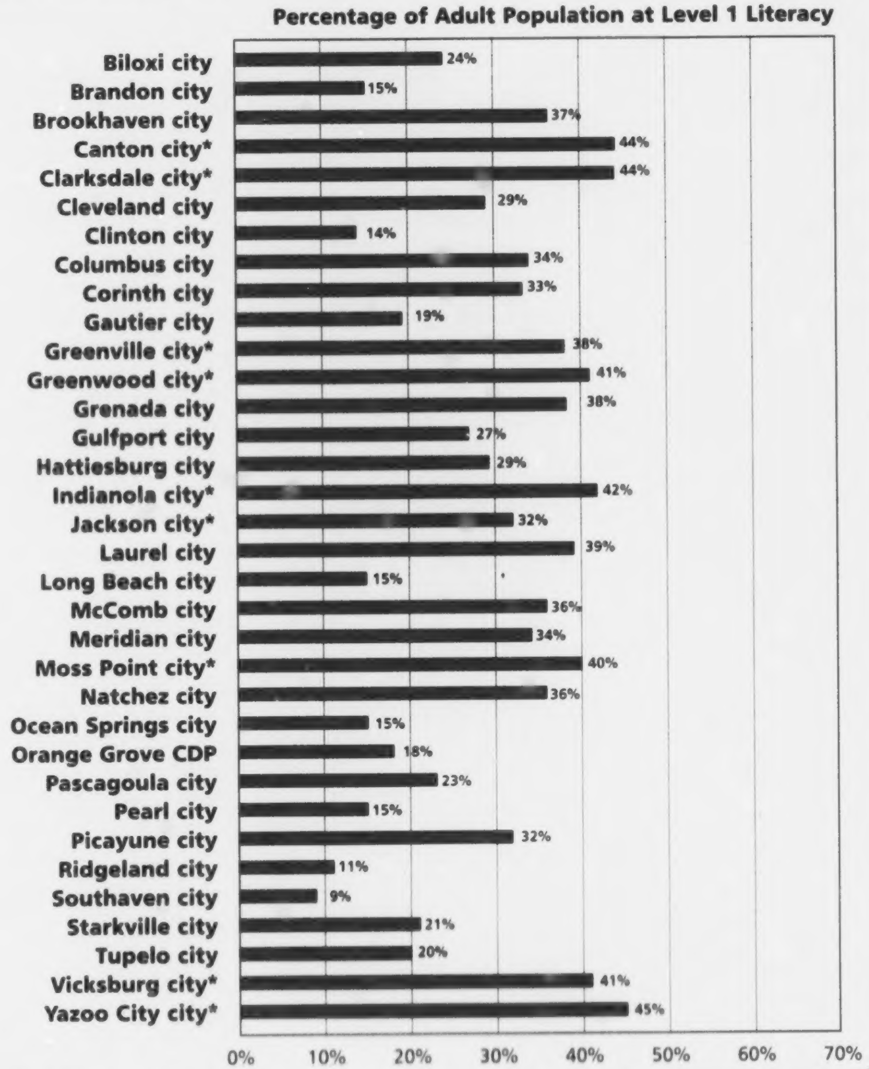
## Municipalities (with adult populations of at least 5,000)



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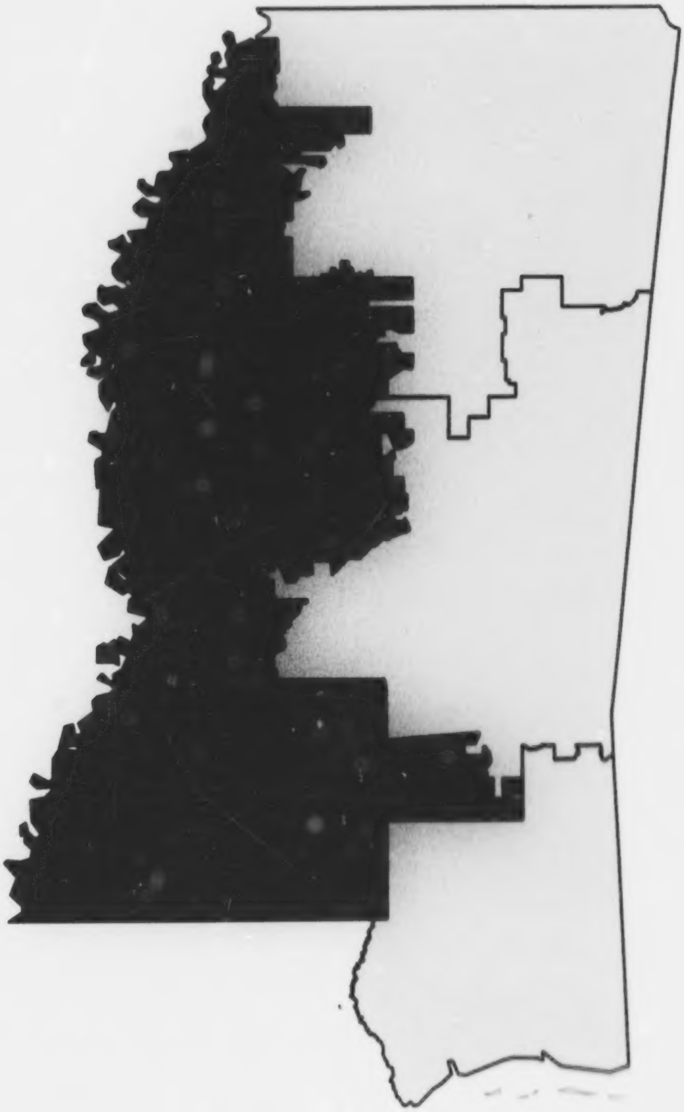
# The State of Literacy in America: Mississippi

## Level 1 Adult Literacy Rates, by Congressional District

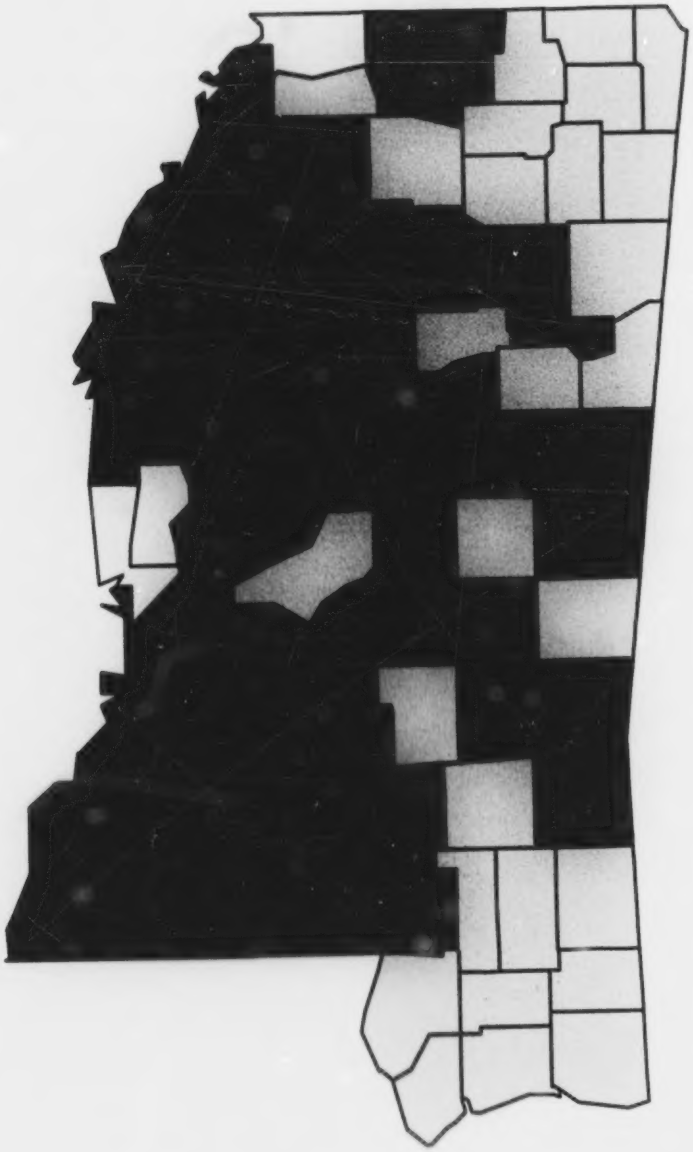

Percentage of adult population with Level 1 Literacy skills
■ 30% or greater (1)
□ 20% to 30% (1)
■ 15% to 20% (1)
■ 10% to 15% (4)
■ 10% or less (6)
□ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Mississippi

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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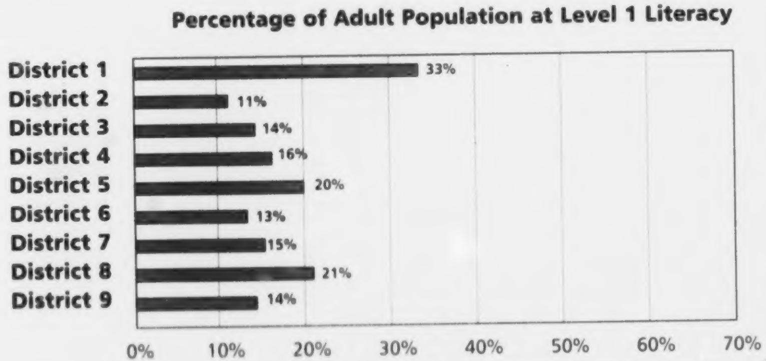
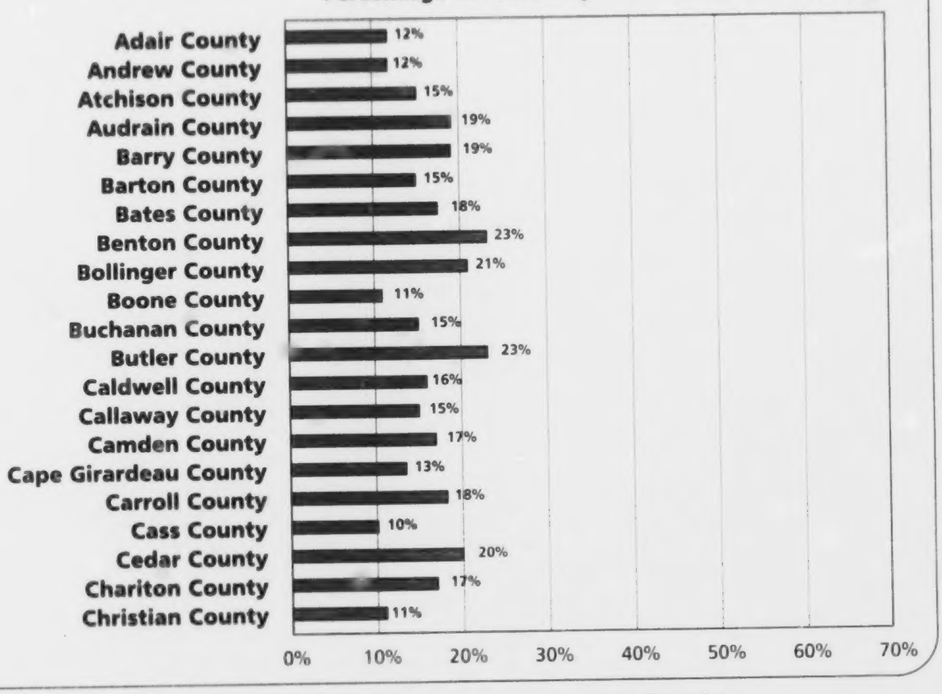
# Missouri

## 17% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties ( with adult populations of at least 5,000)



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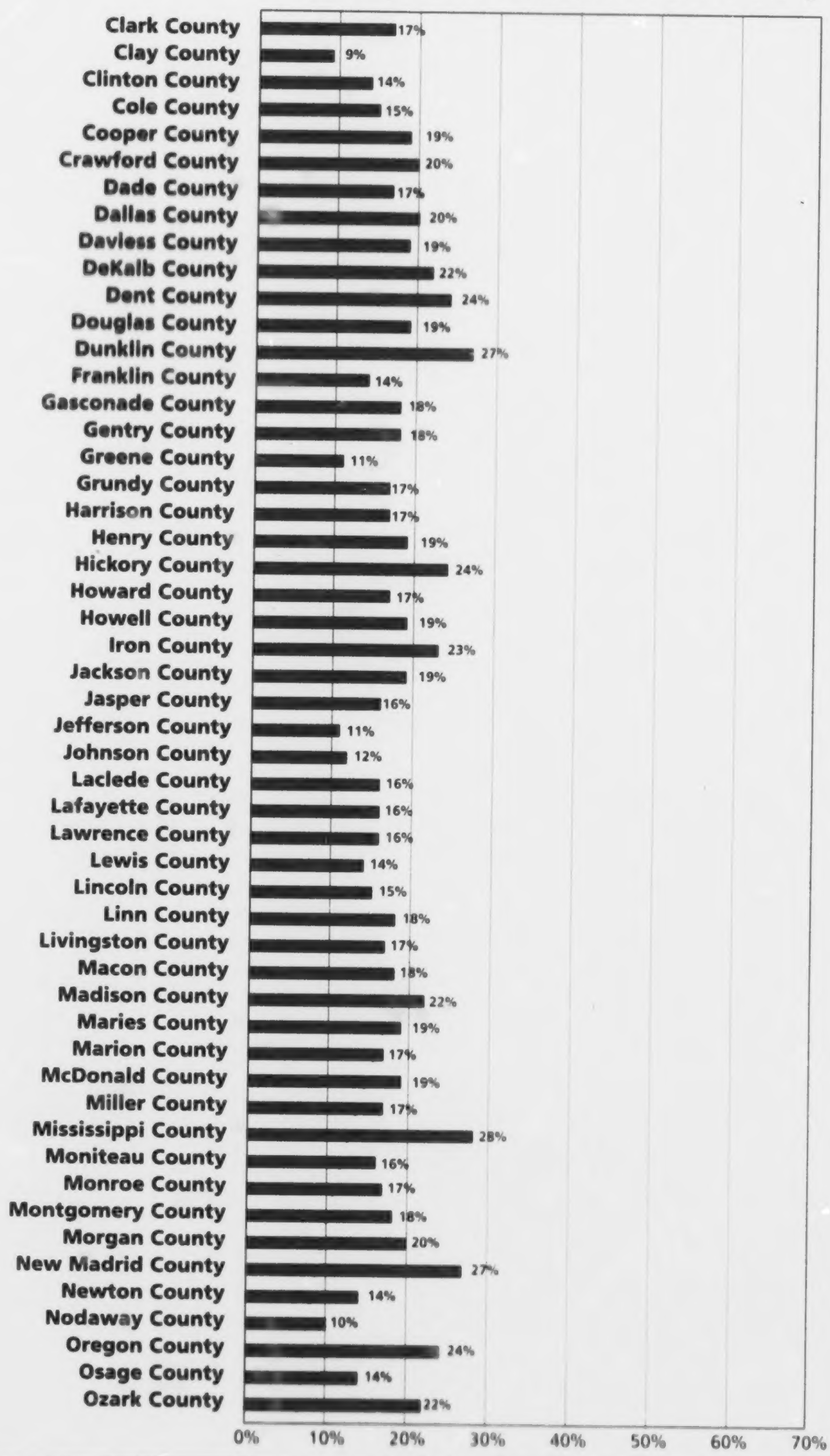
## Counties (cont.)



Percentage of Adult Population at Level 1 Literacy

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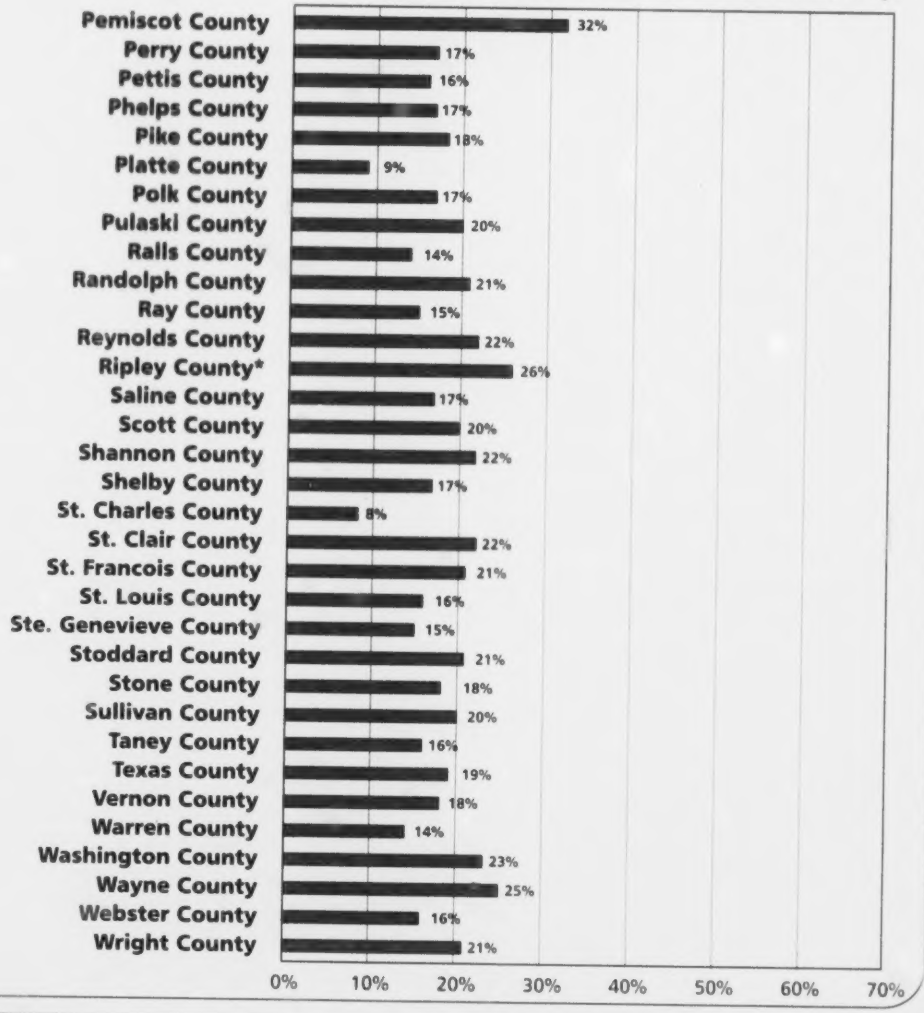
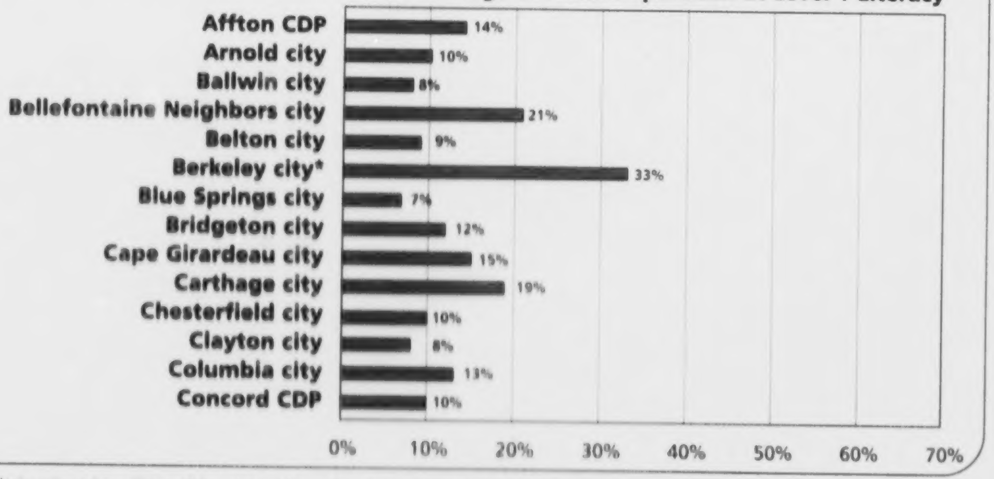
## Counties (cont.)

Percentage of Adult Population at Level 1 Literacy



## Municipalities (with adult populations of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



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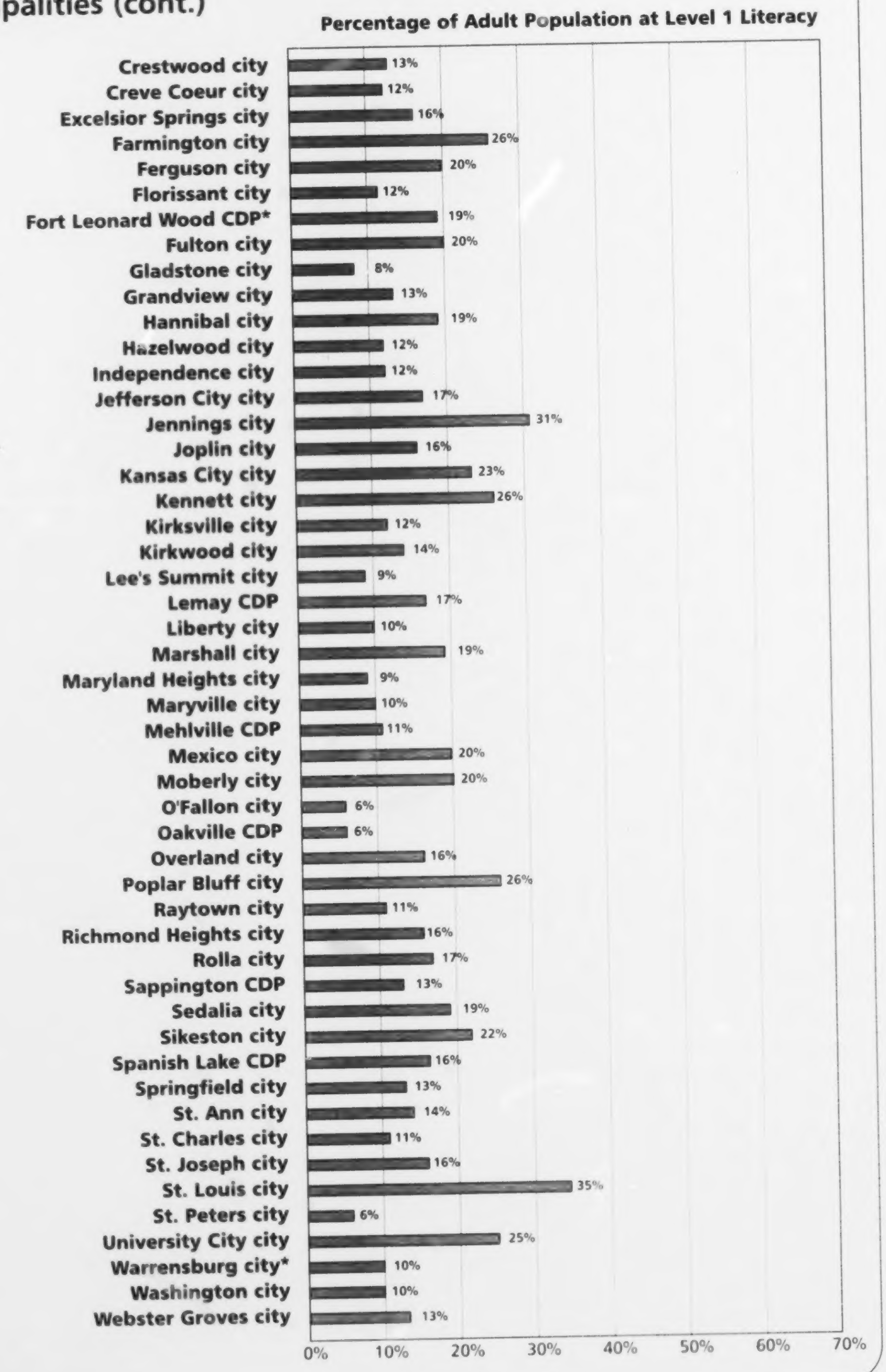
## Municipalities (cont.)



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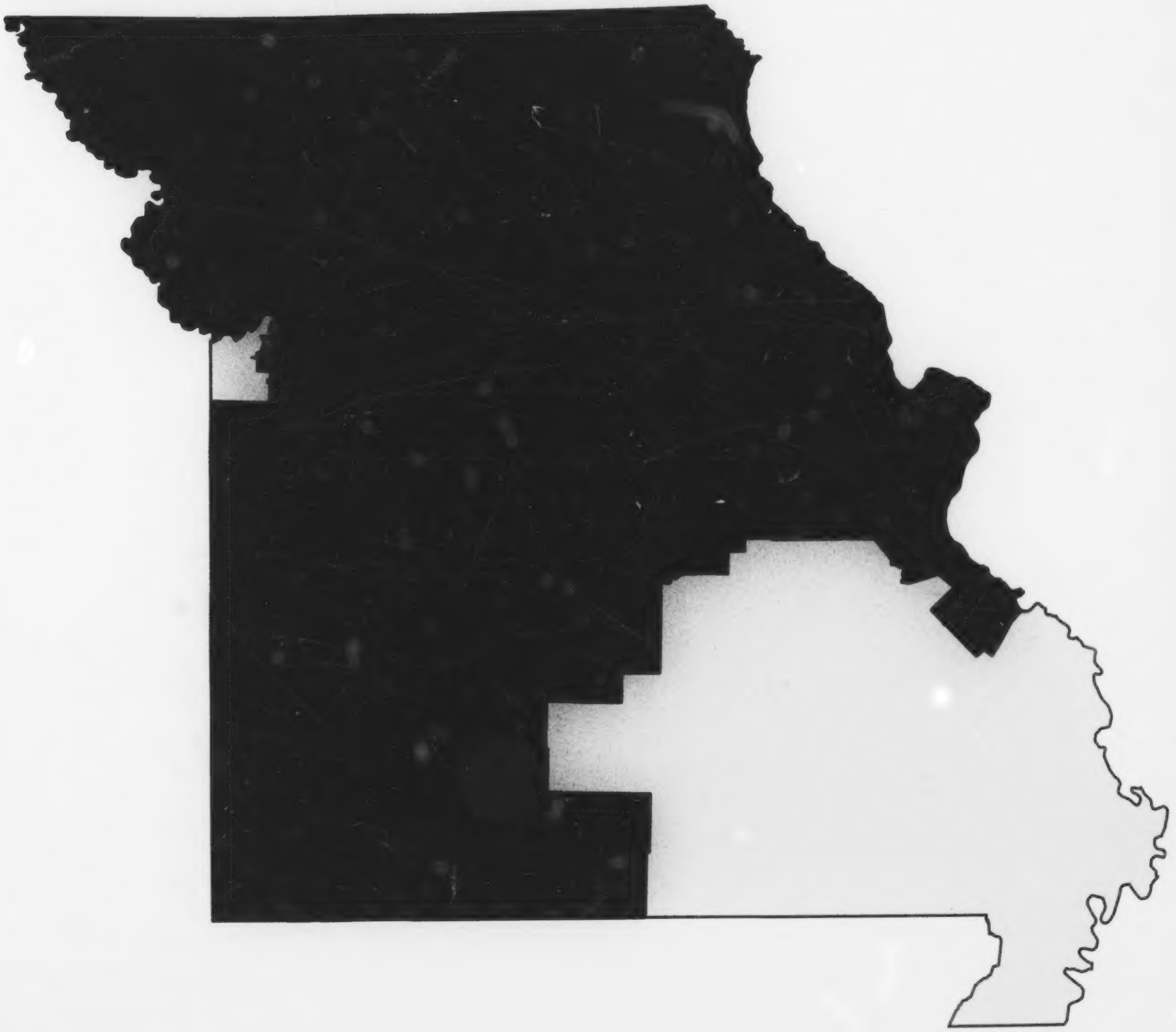
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Missouri

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

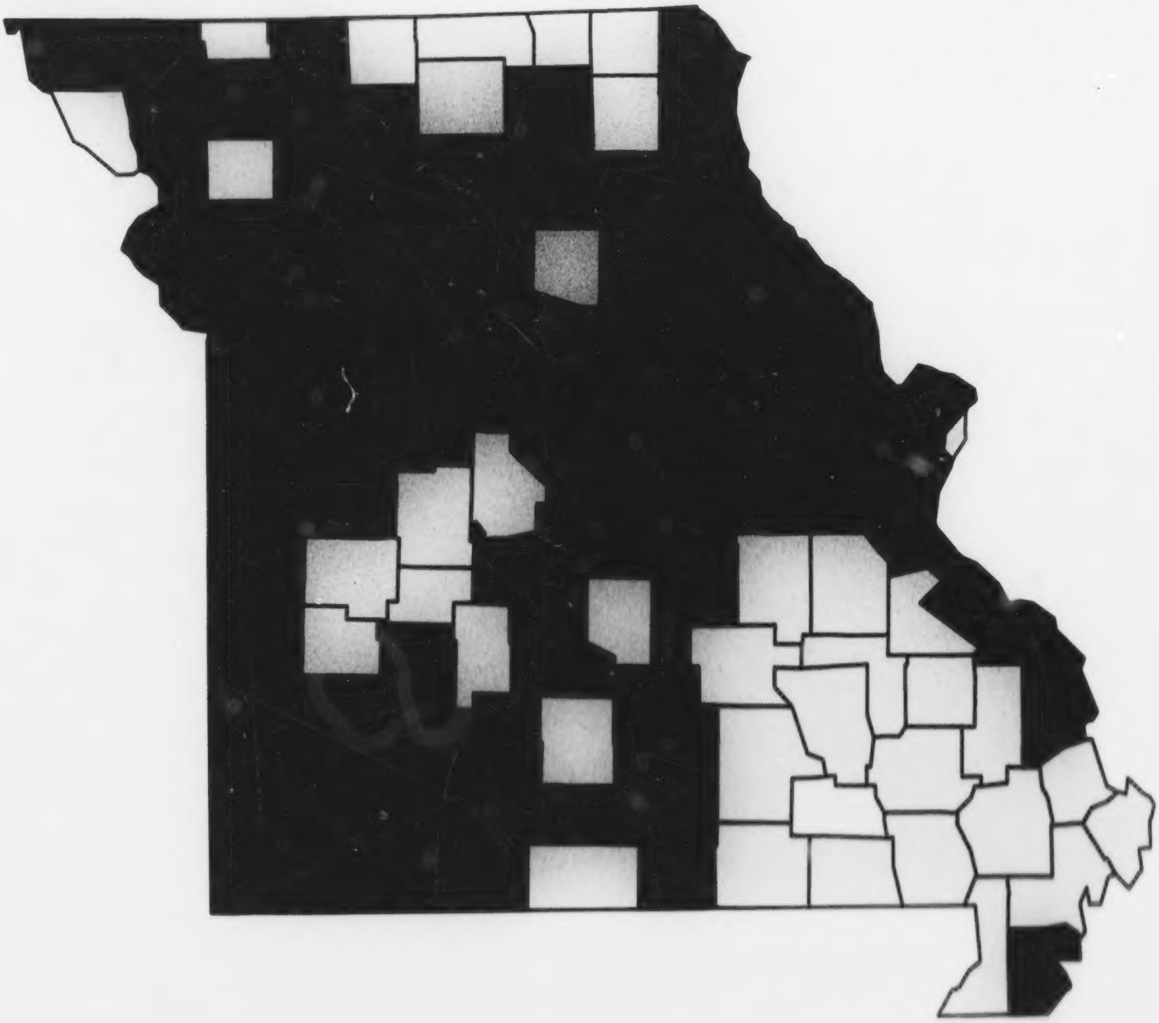
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Missouri

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

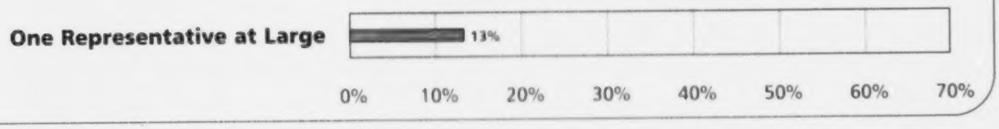
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# Montana

## 13% of adult population is at Level 1 Literacy

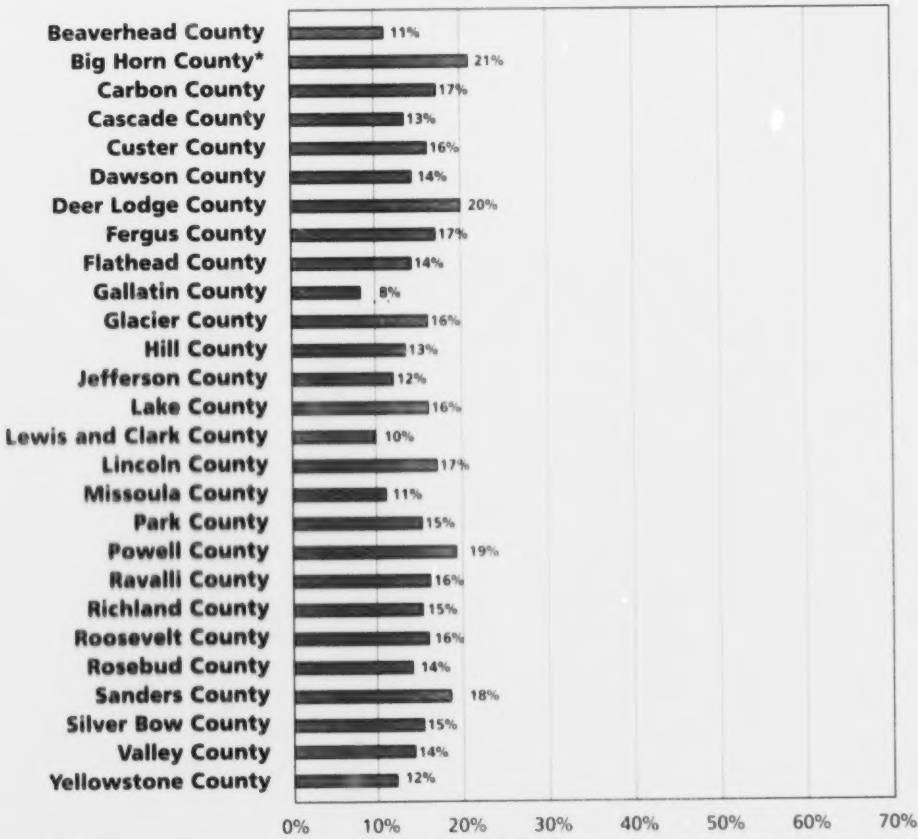
### Congressional Districts

Percentage of Adult Population at Level 1 Literacy



### Counties (with adult populations of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



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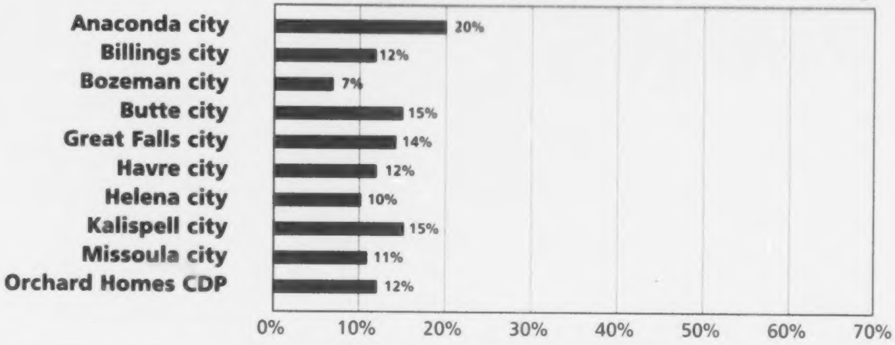
**Montana**

## Municipalities (with adult populations of at least 5,000)

**Percentage of Adult Population at Level 1 Literacy**



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# The State of Literacy in America: Montana

## Level 1 Adult Literacy Rates, by Congressional District

Source: U.S. Department of Education
Division of Adult Education and Literacy

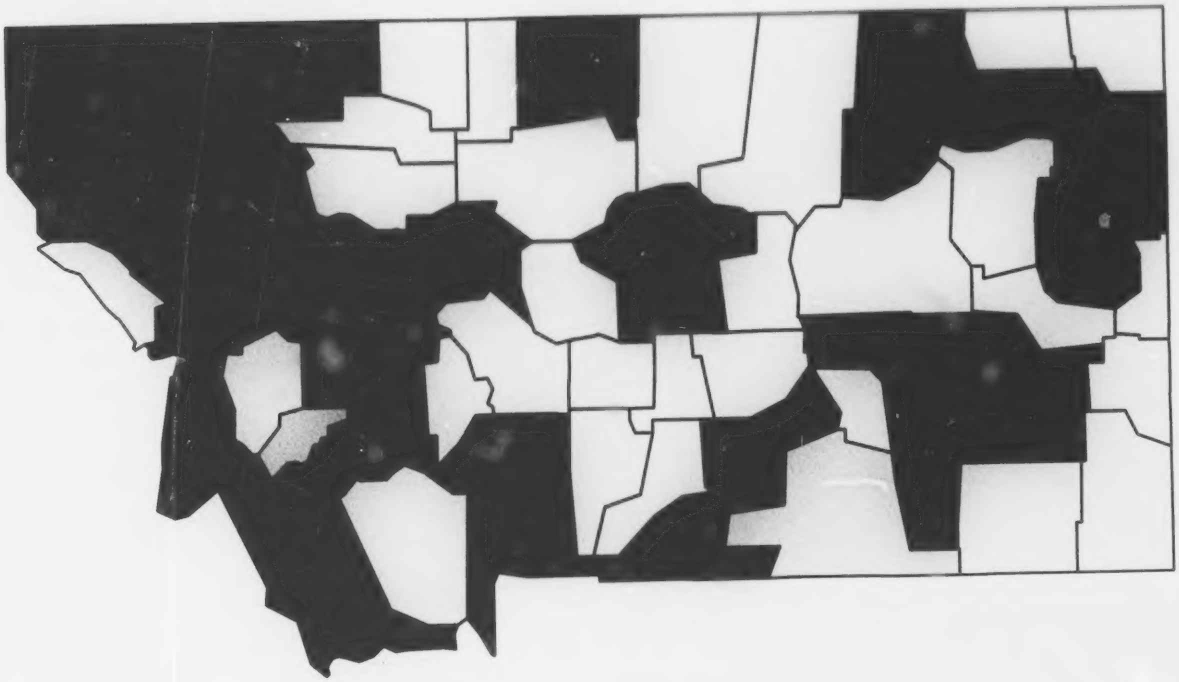
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

# The State of Literacy in America: Montana

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

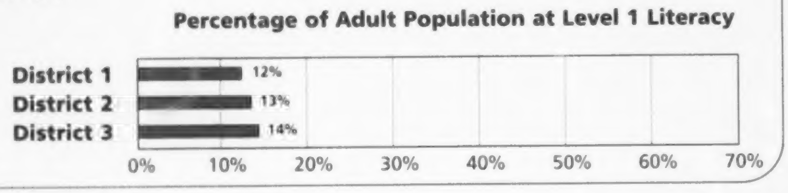
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

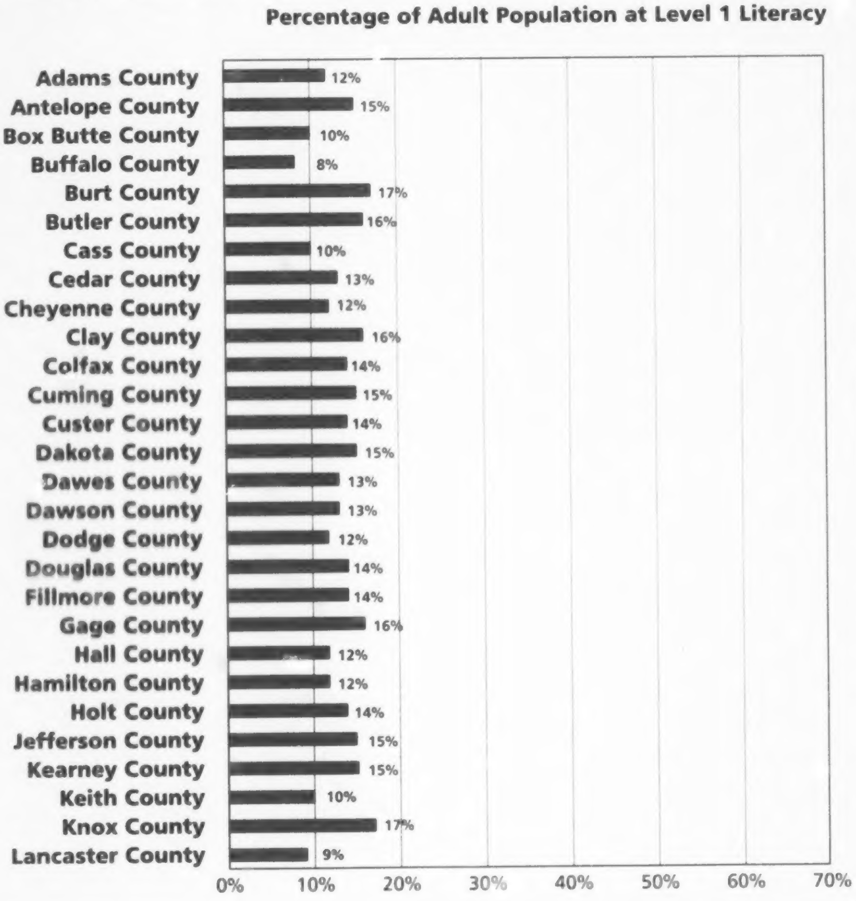
# Nebraska

## 13% of adult population is at Level 1 Literacy

### Congressional Districts



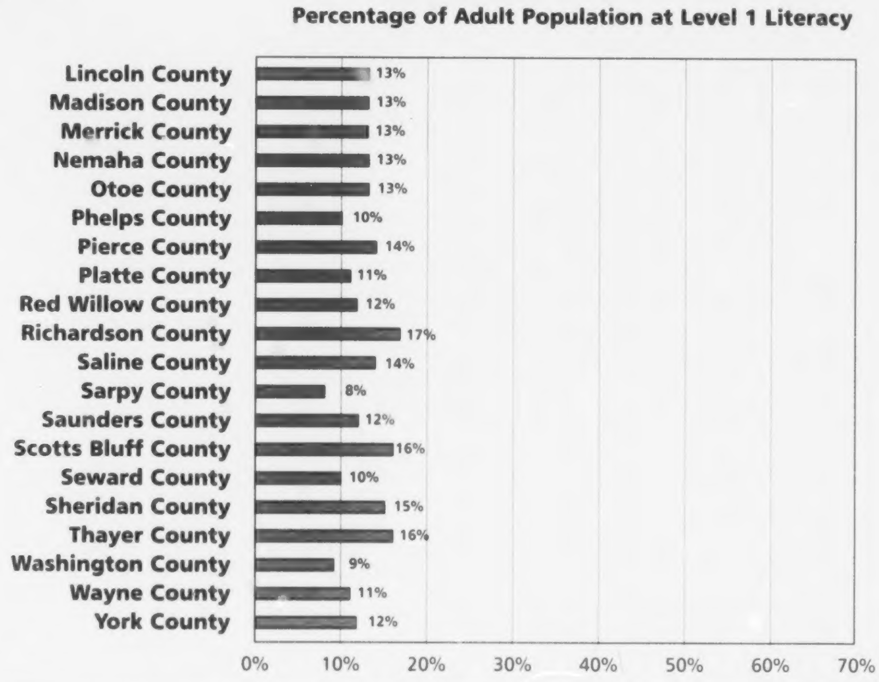
### Counties (with adult populations of at least 5,000)



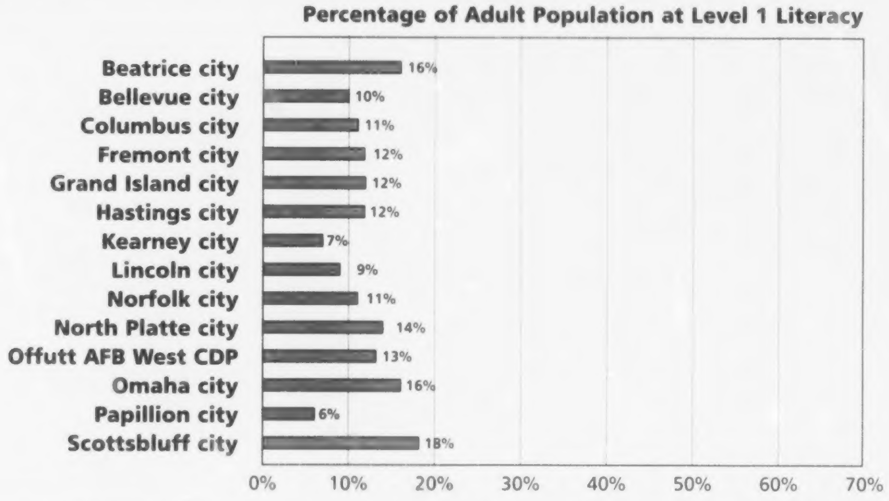
* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Nebraska
## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

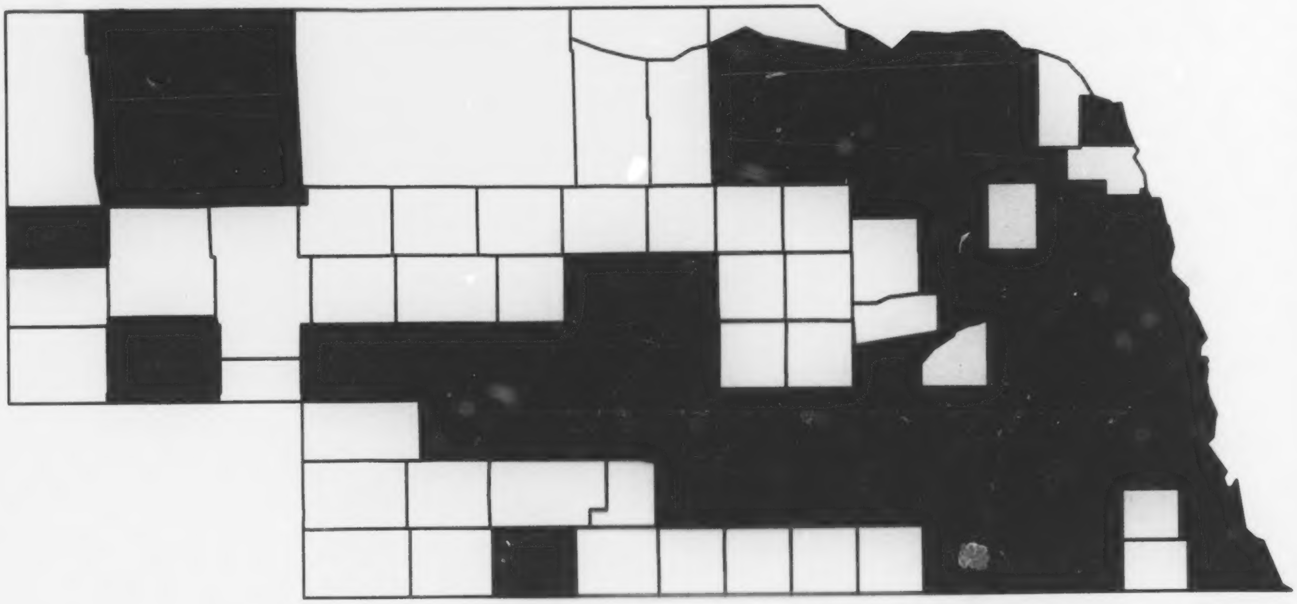
■ 30% or greater (1)
□ 20% to 30% (1)
■ 15% to 20% (1)
■ 10% to 15% (4)
■ 10% or less (6)
□ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Nebraska

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

- ■ 30% or greater (1)
- □ 20% to 30% (1)
- ■ 15% to 20% (1)
- ■ 10% to 15% (4)
- ■ 10% or less (6)
- □ no estimate available (14)

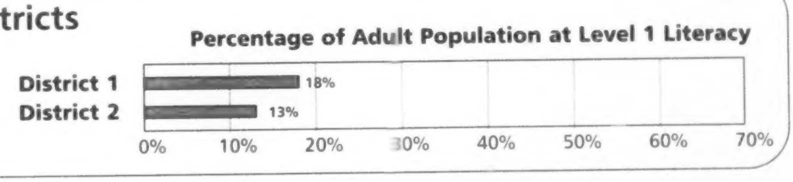
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

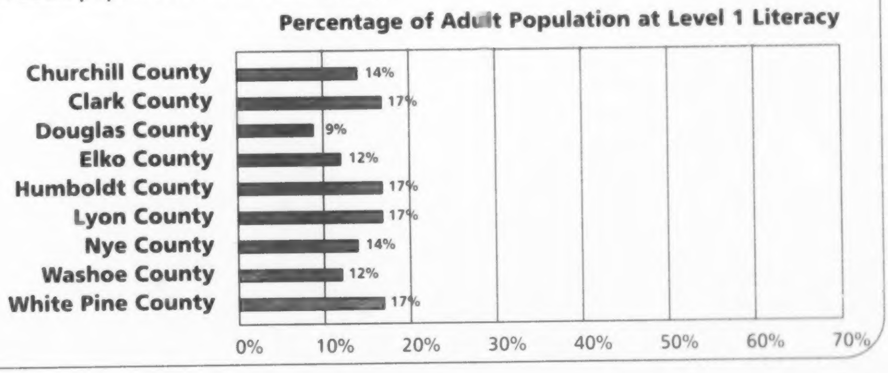
# Nevada

## 15% of adult population is at Level 1 Literacy

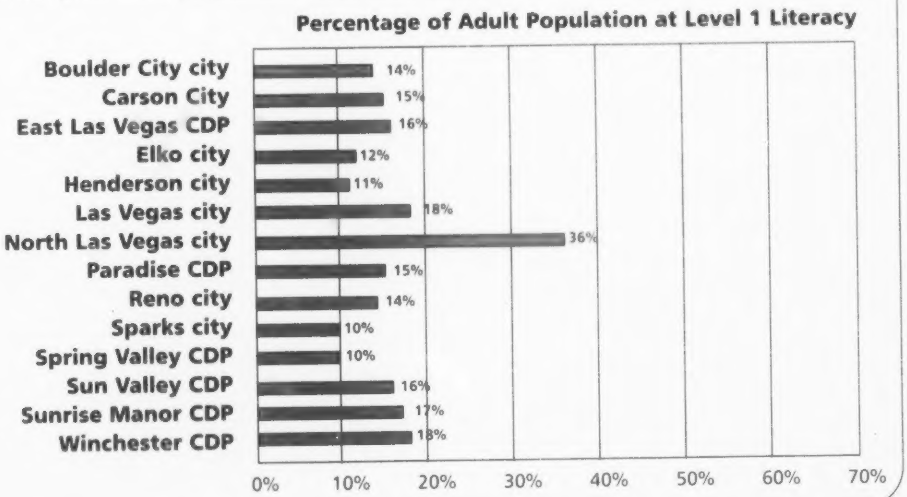
### Congressional Districts



### Counties (with adult populations of at least 5,000)



### Municipalities (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Nevada

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

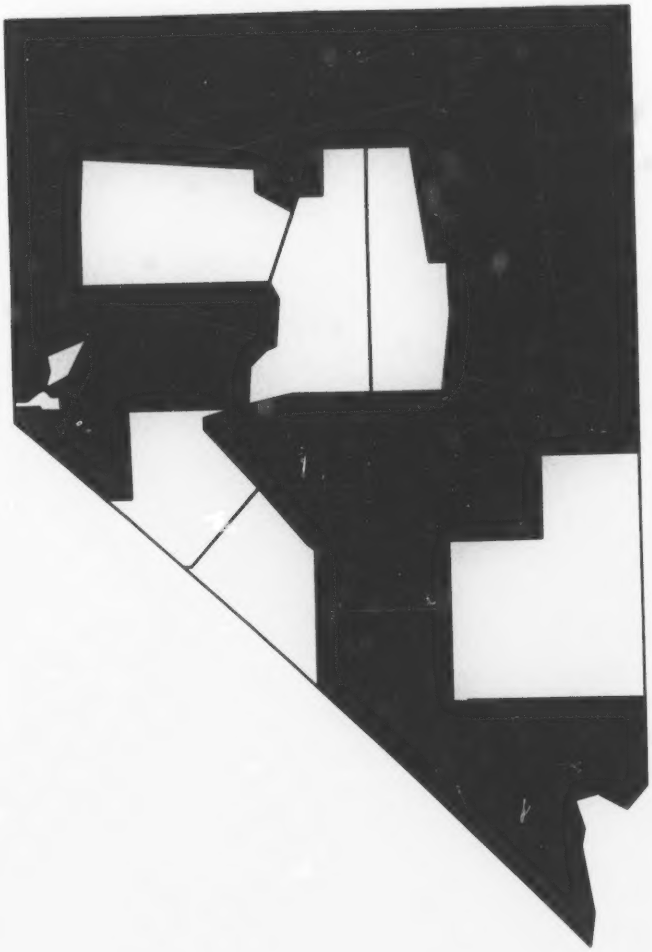
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Nevada

## Level 1 Adult Literacy Rates, by County

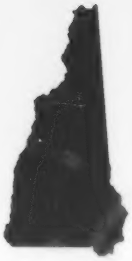


Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

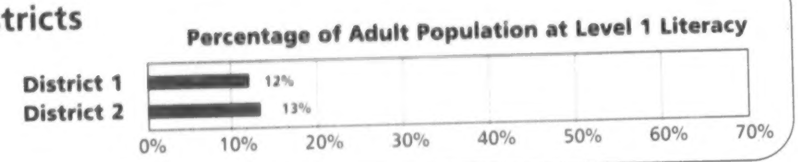
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).



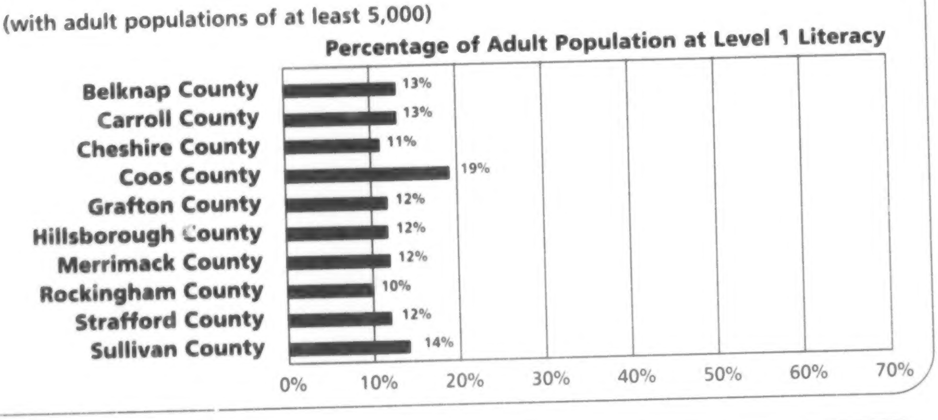
# New Hampshire

## 12% of adult population is at Level 1 Literacy

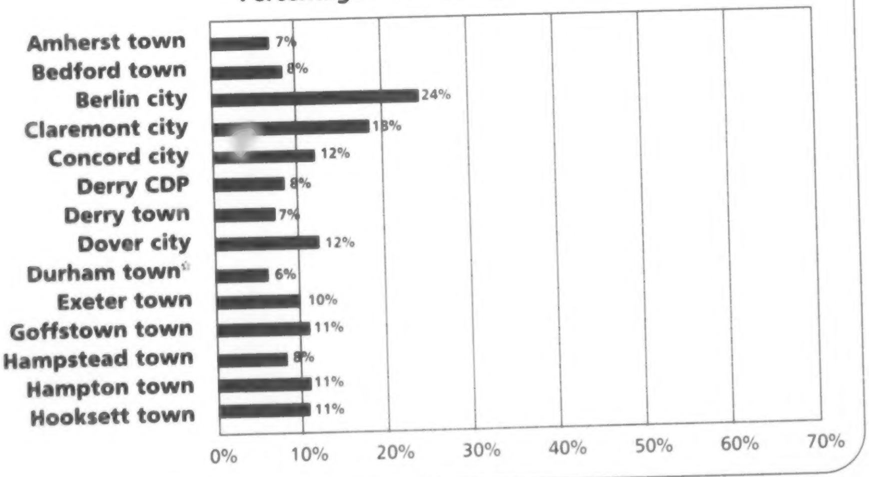
### Congressional Districts



### Counties (with adult populations of at least 5,000)



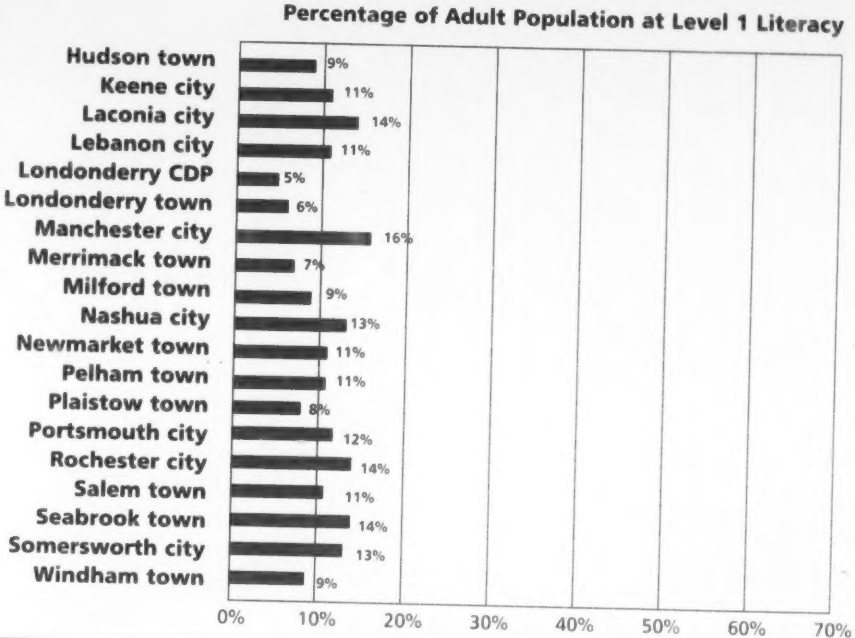
### Municipalities (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: New Hampshire

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: New Hampshire

## Level 1 Adult Literacy Rates, by County

**Percentage of adult population with Level 1 Literacy skills**

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

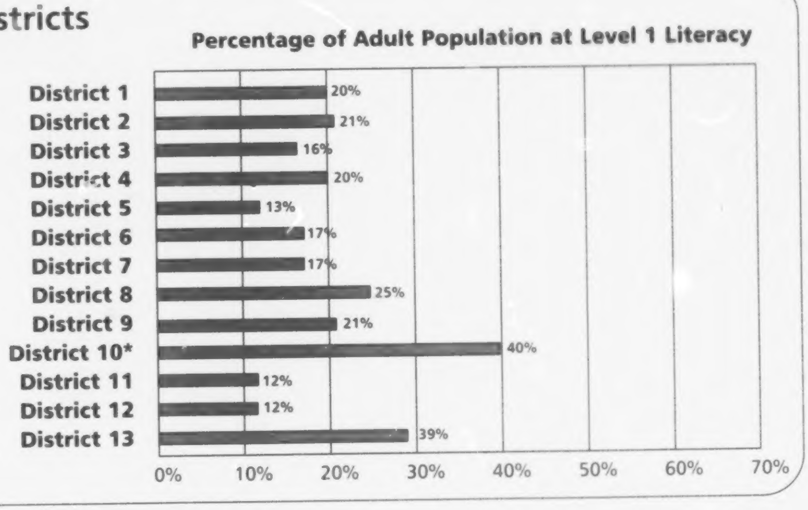
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

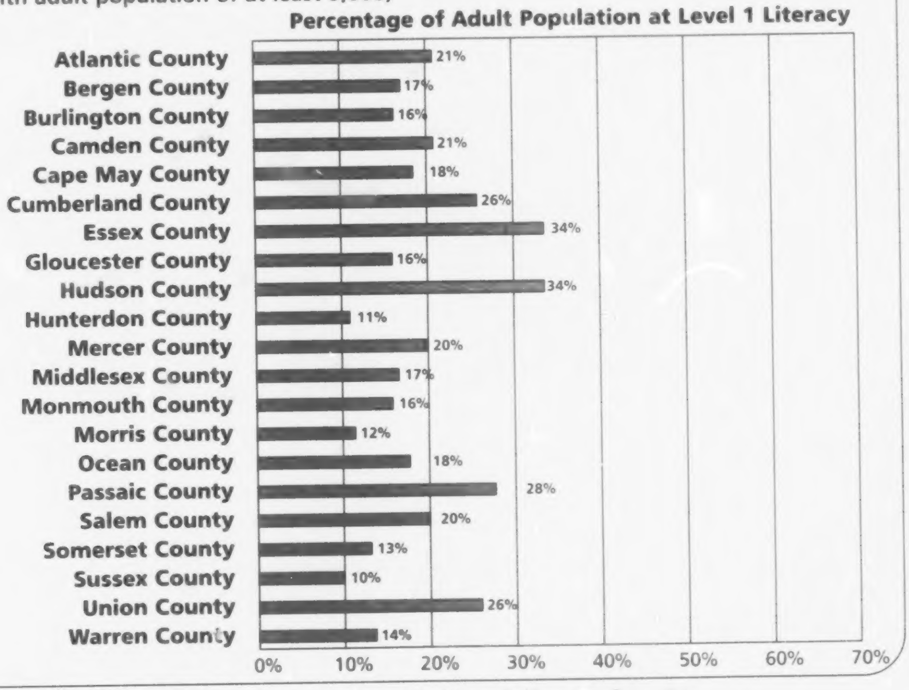
# New Jersey

## 21% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult population of at least 5,000)

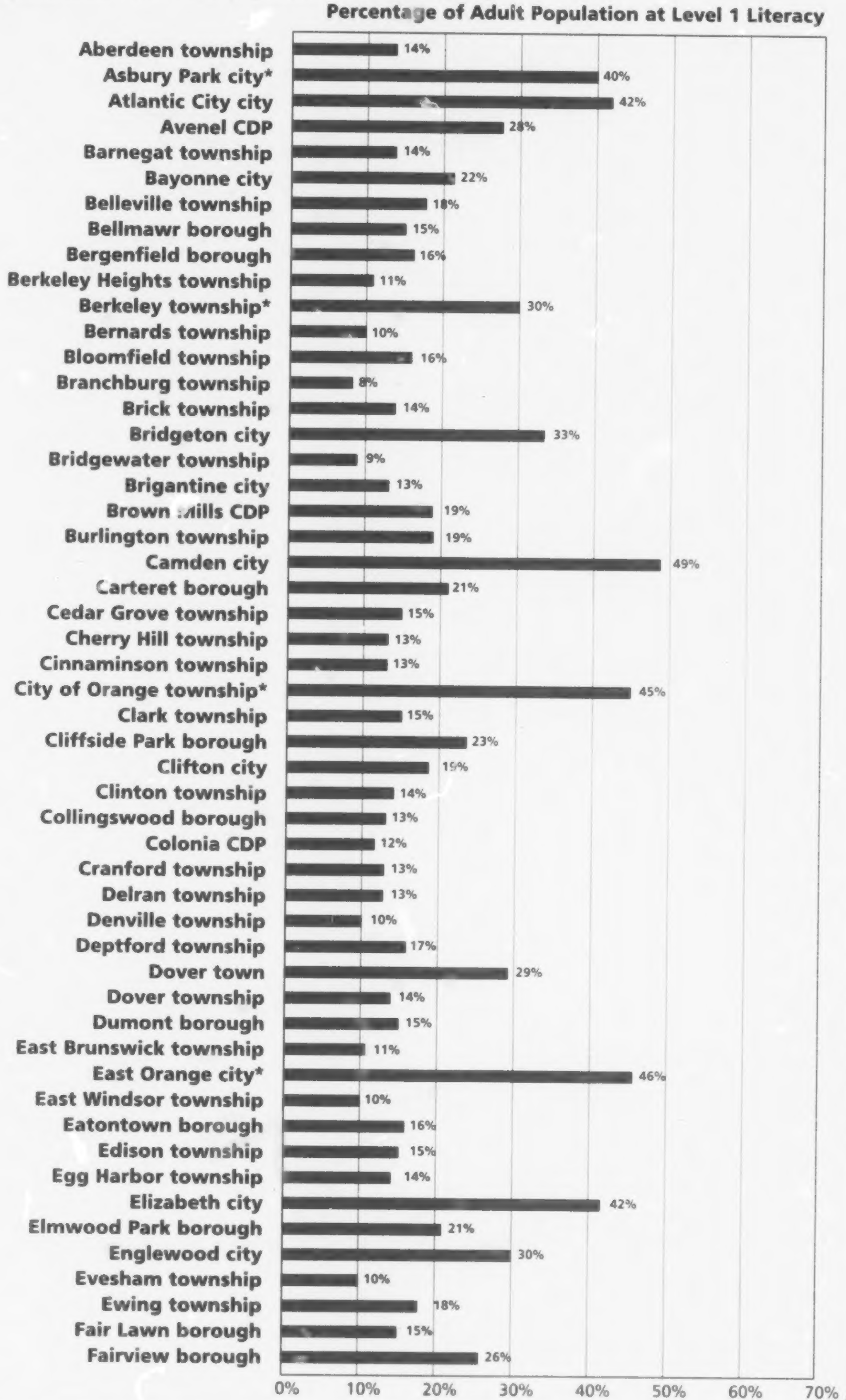


* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

**New Jersey**

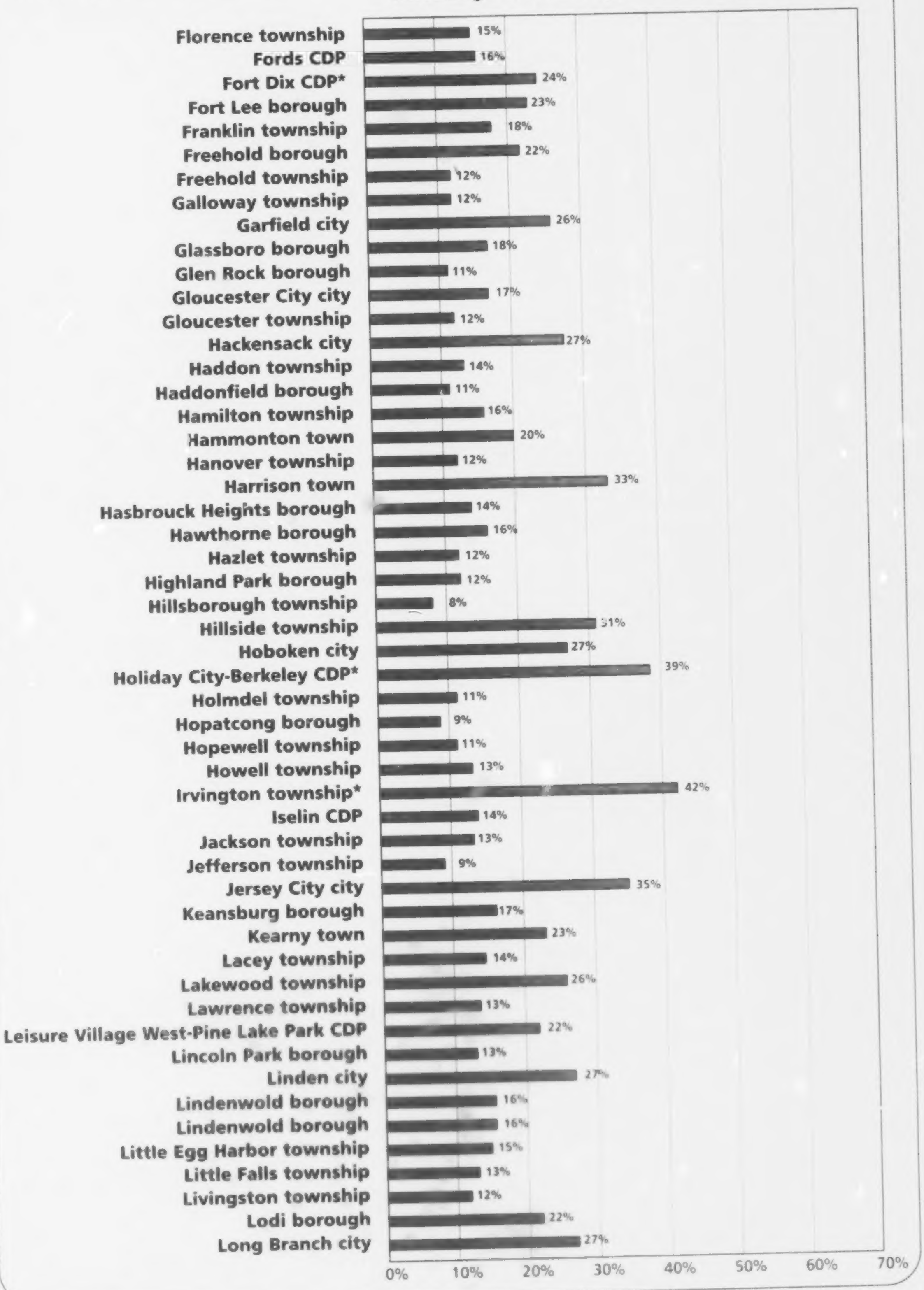
## Municipalities (with adult population of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

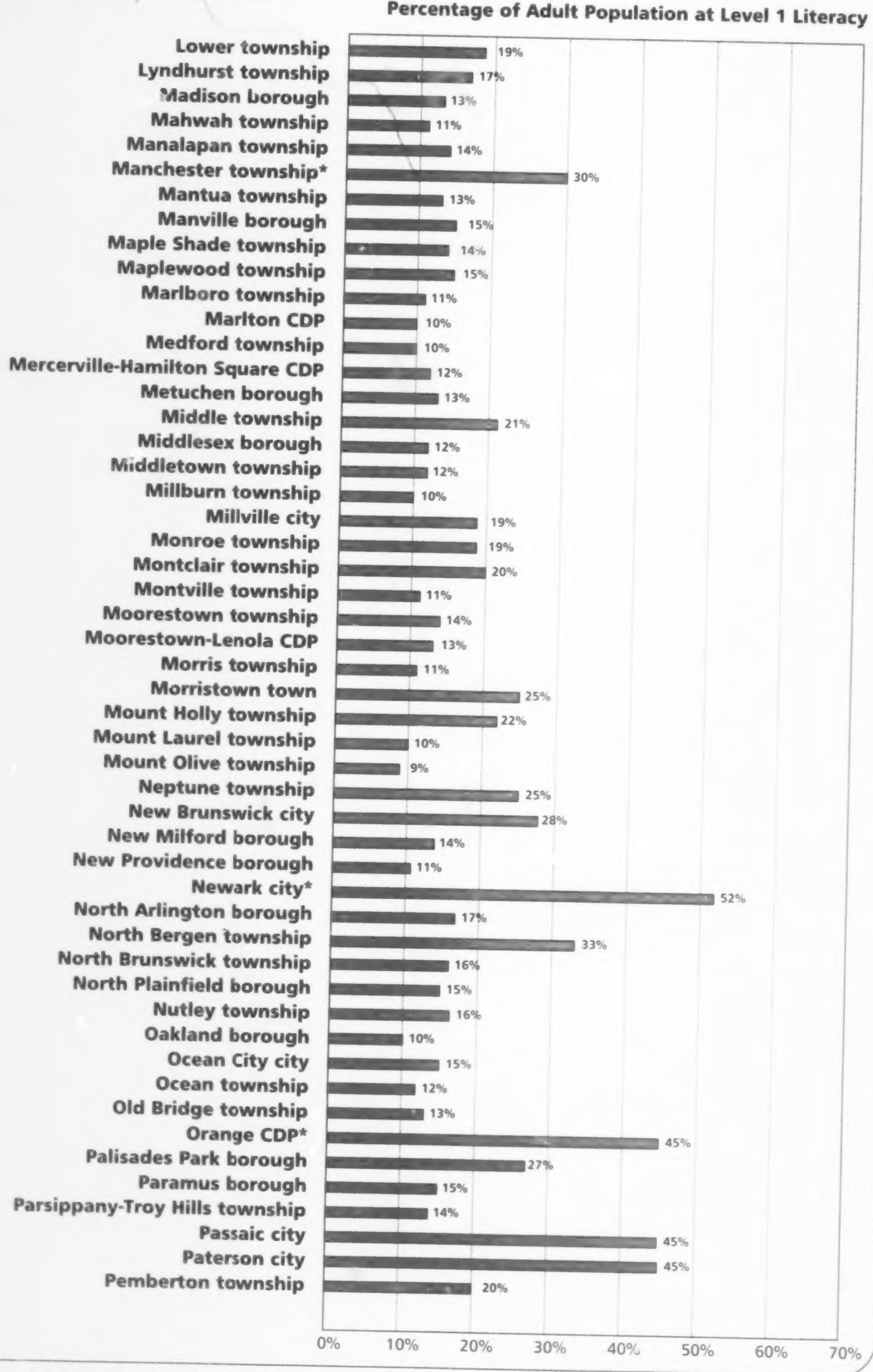
## Municpalities (cont.)


Percentage of Adult Population at Level 1 Literacy

* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov)

## Municipalities (cont.)

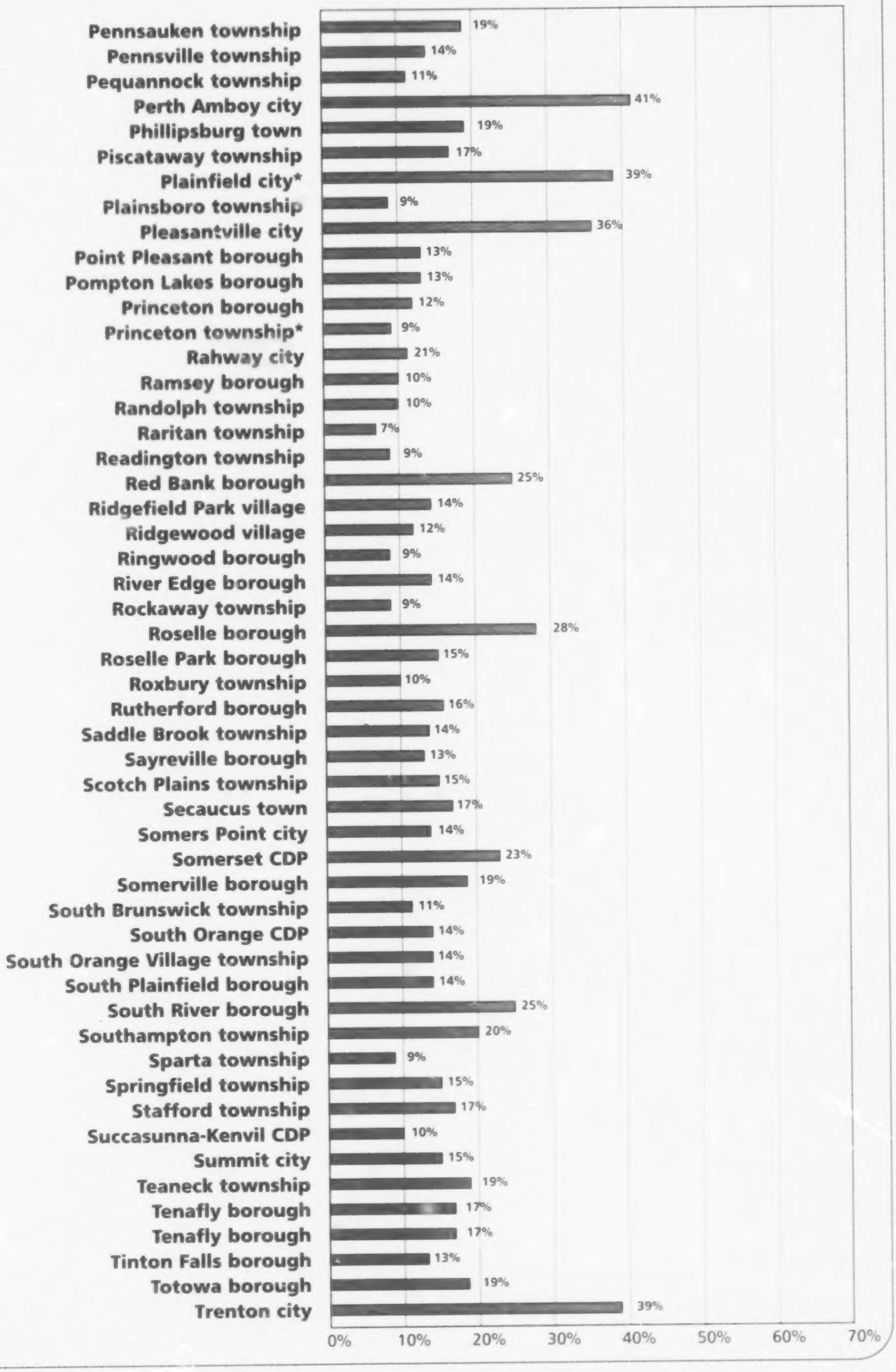


* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municpalities (cont.)

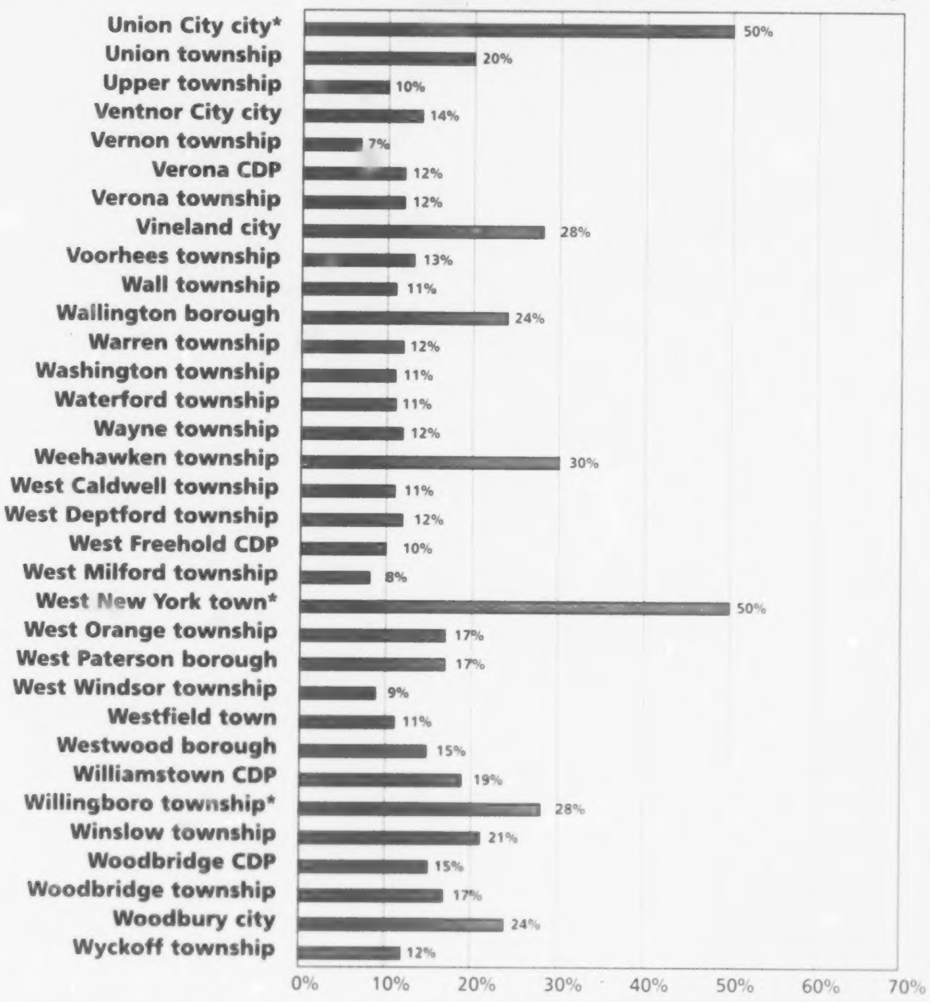
Percentage of Adult Population at Level 1 Literacy



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



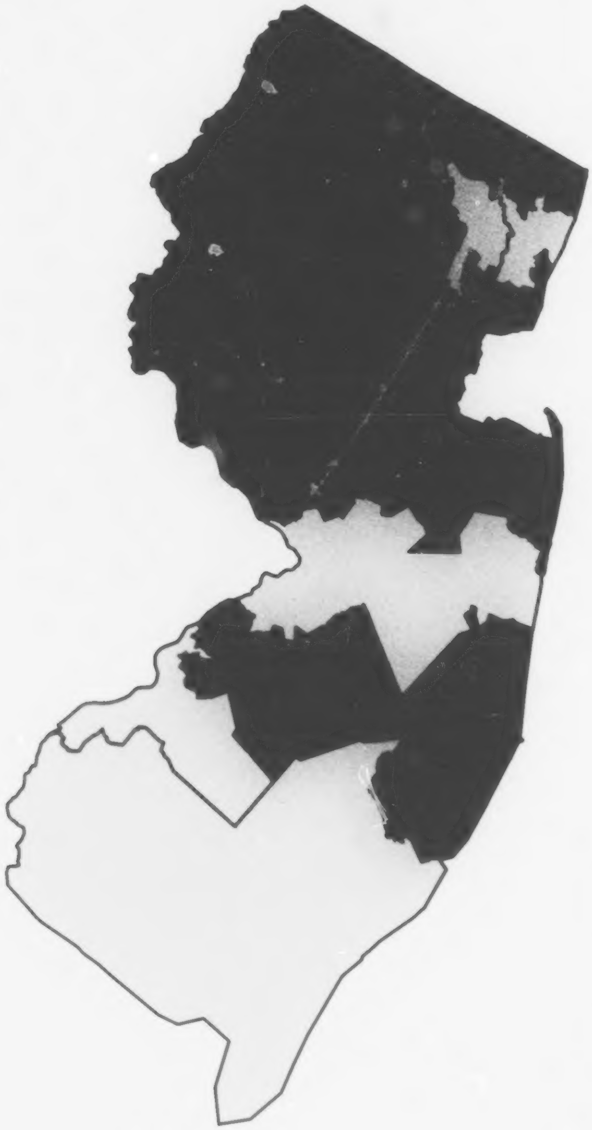
Percentage of Adult Population at Level 1 Literacy

* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: New Jersey

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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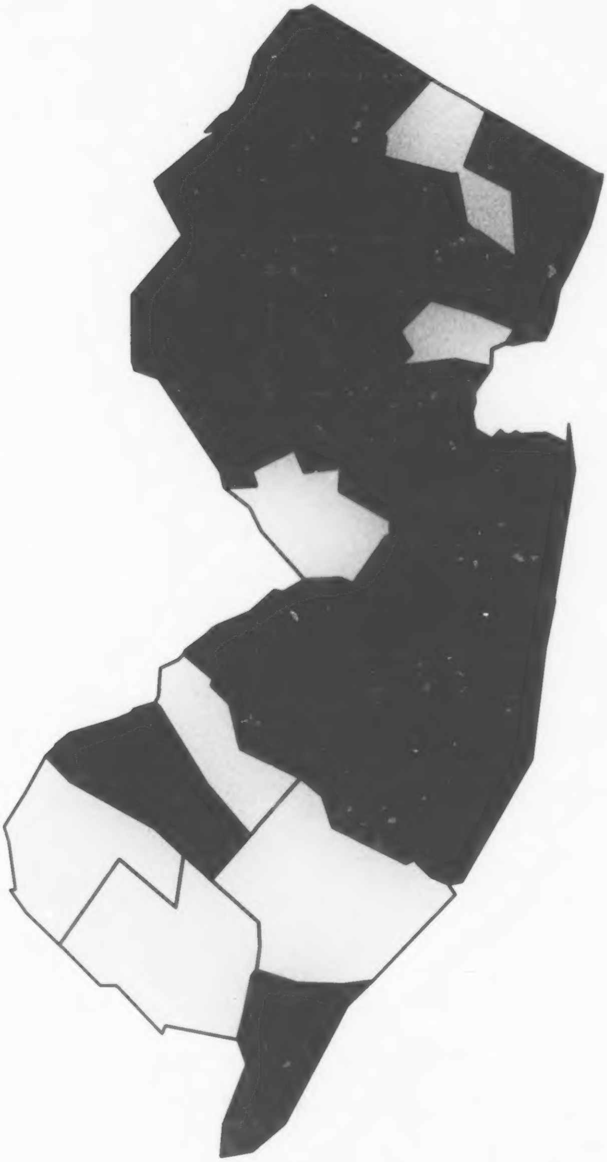
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: New Jersey

## Level 1 Adult Literacy Rates, by County



Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

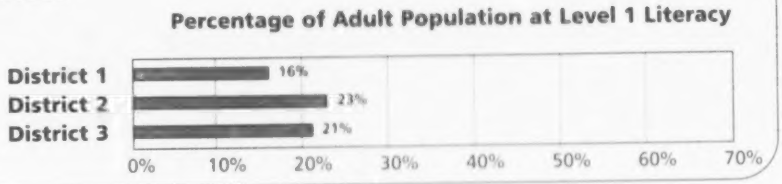
Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

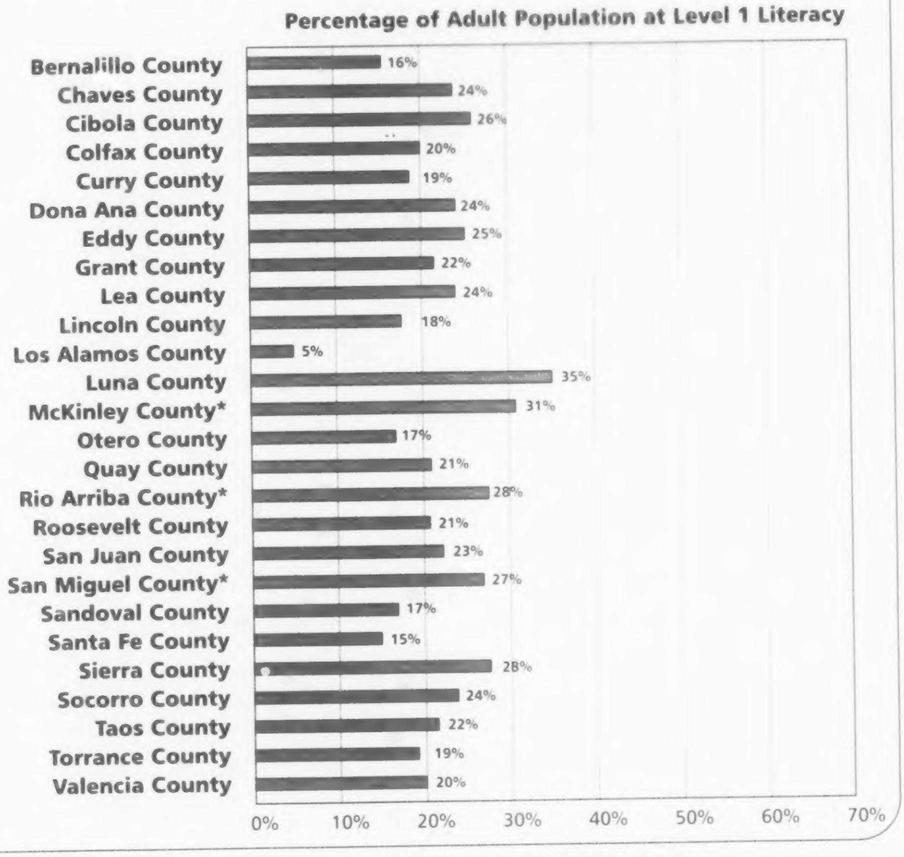
# New Mexico

## 20% of adult population is at Level 1 Literacy

### Congressional Districts



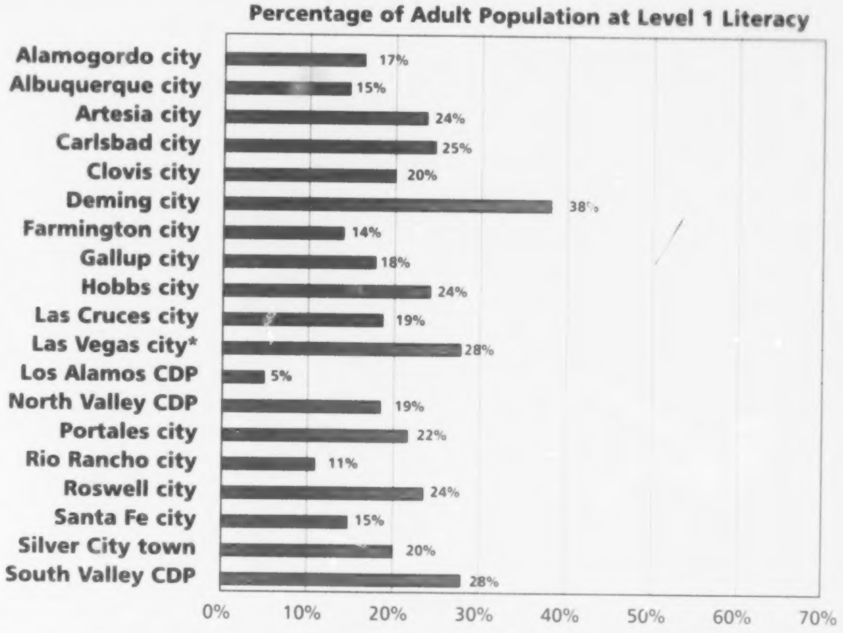
### Counties (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (with adult populations of at least 5,000)

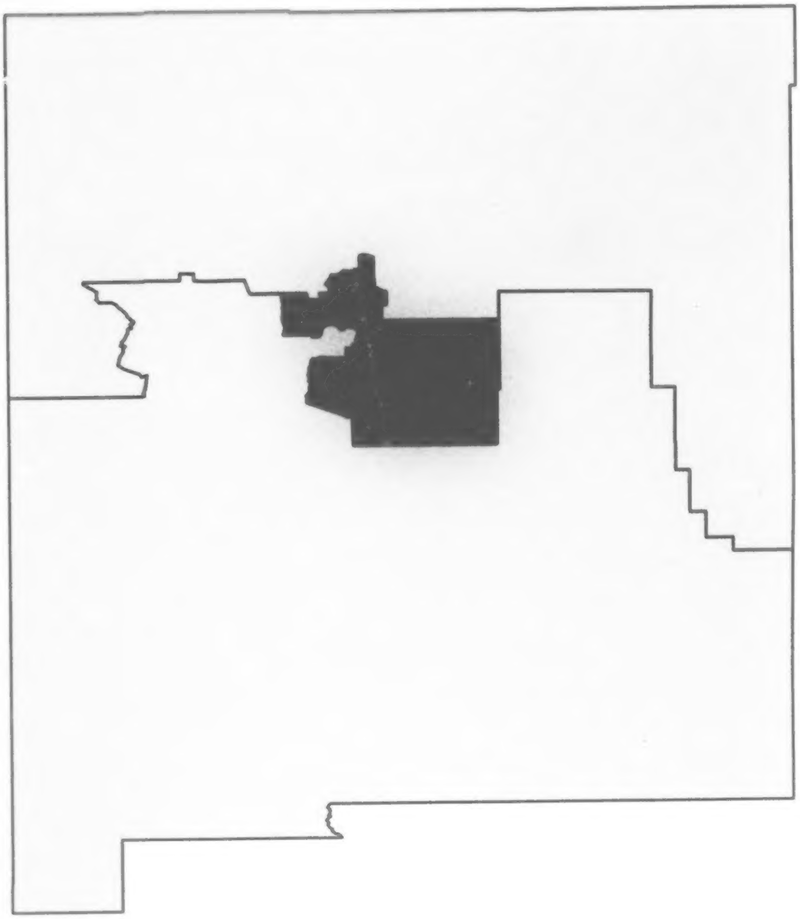


* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: New Mexico

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

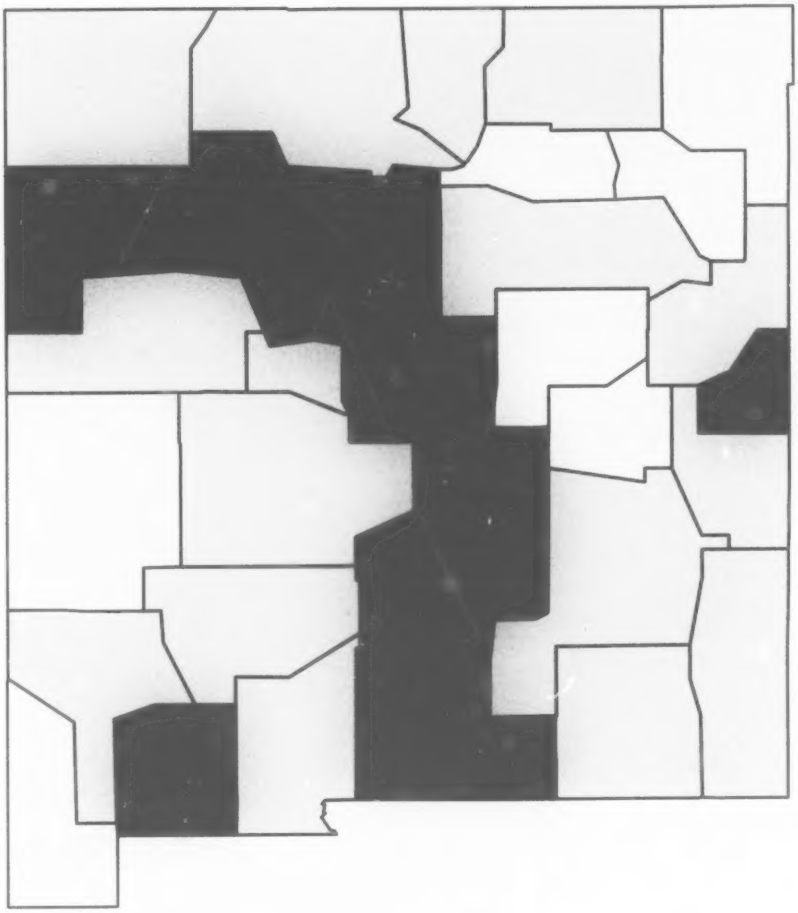
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: New Mexico

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

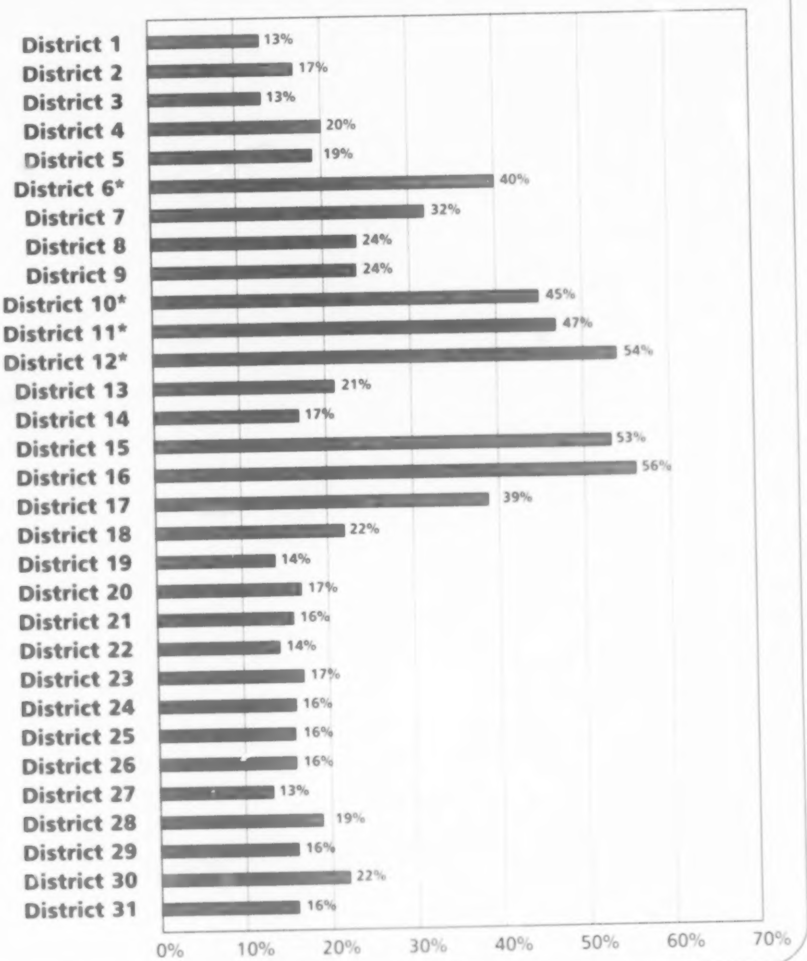
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# New York

## 25% of adult population is at Level 1 Literacy

## Congressional Districts



Percentage of Adult Population at Level 1 Literacy

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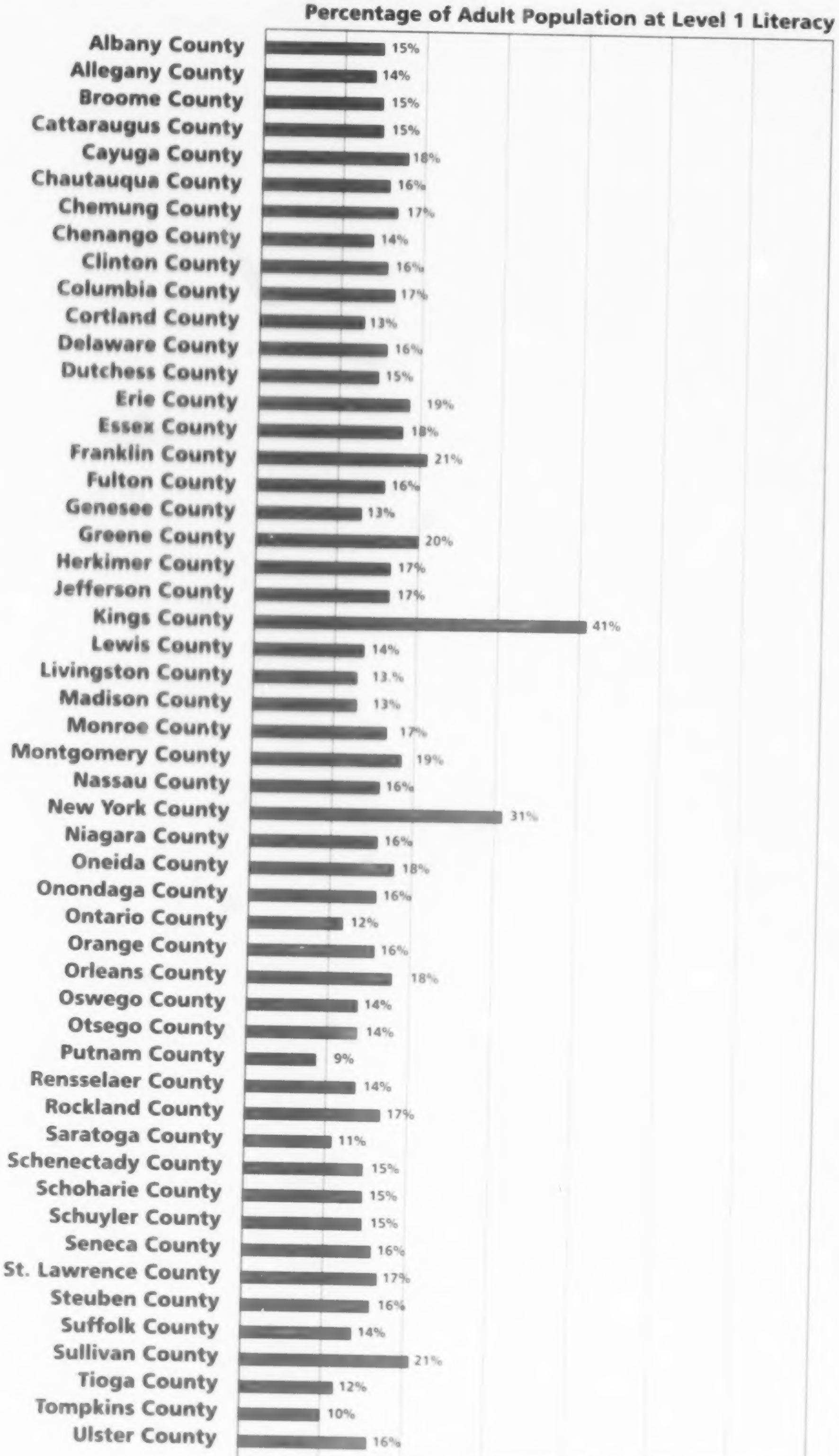
* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

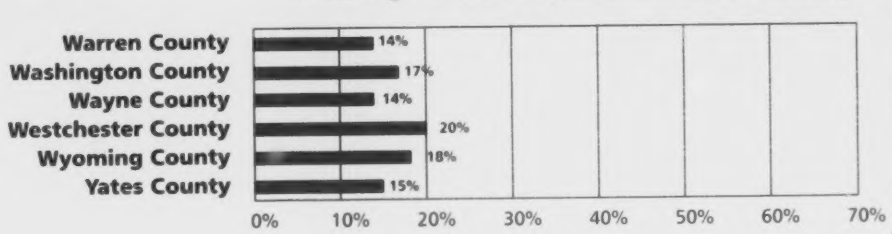
## Counties (with adult populations of at least 5,000)



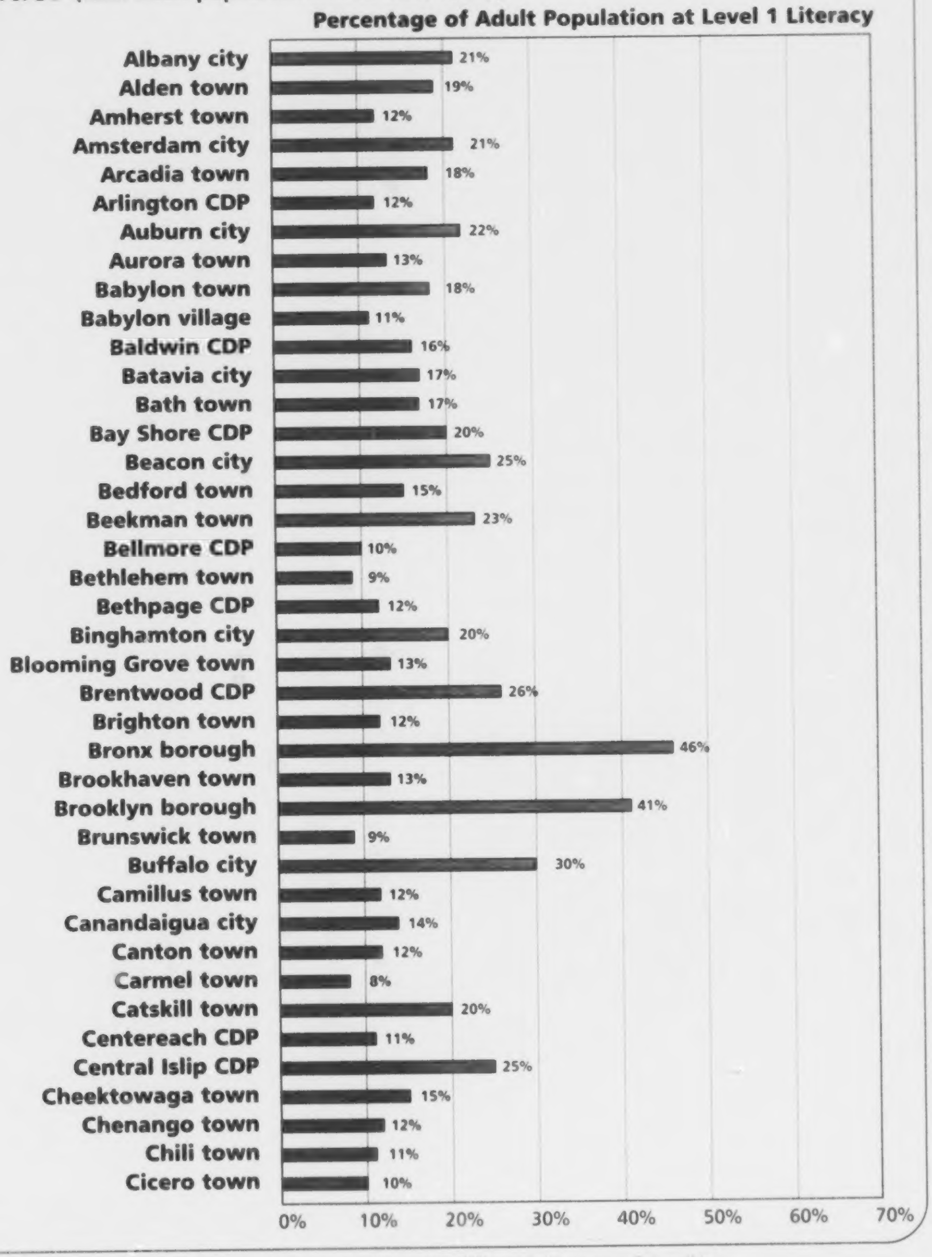
* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov)

## Counties (cont.)



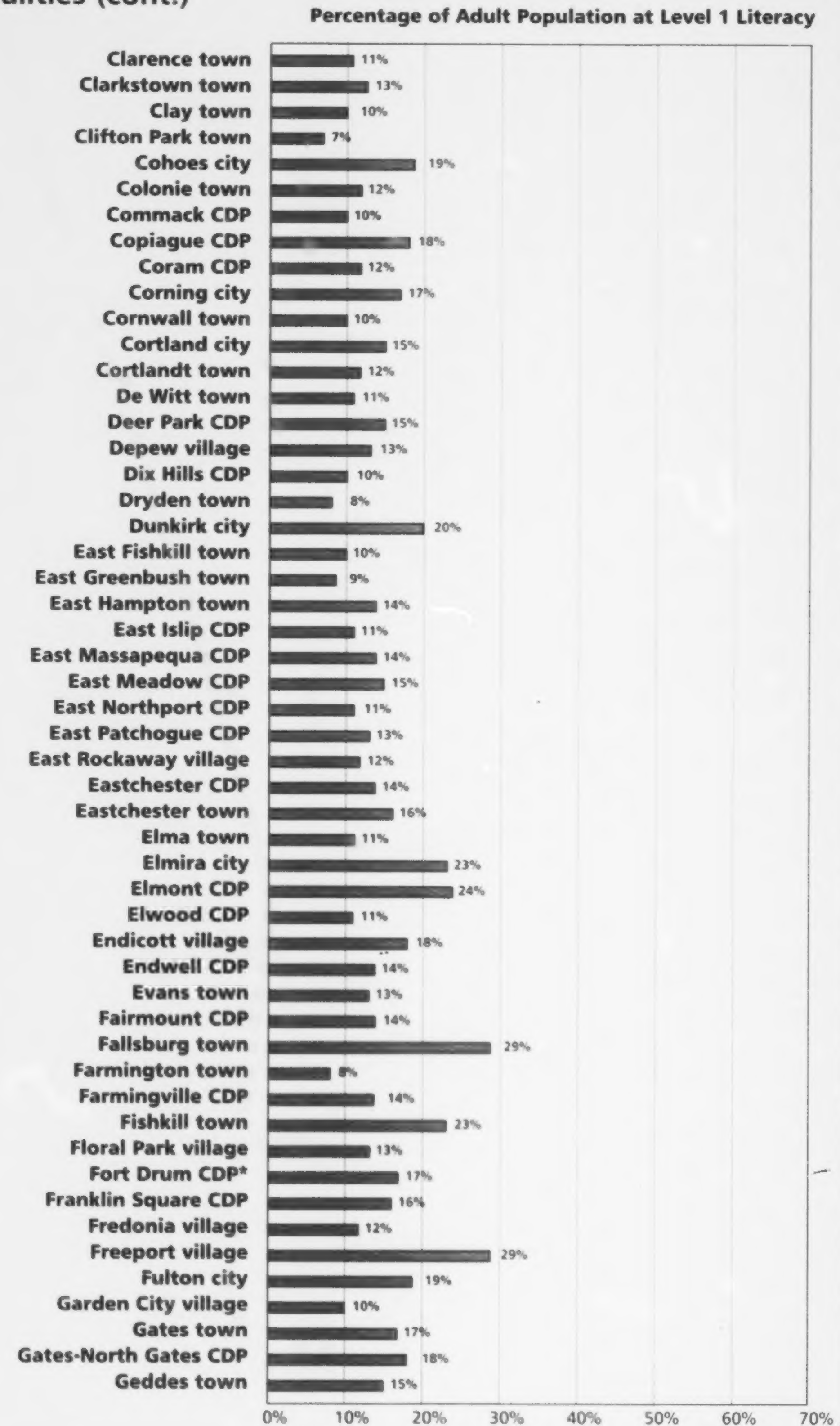
## Municipalities (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

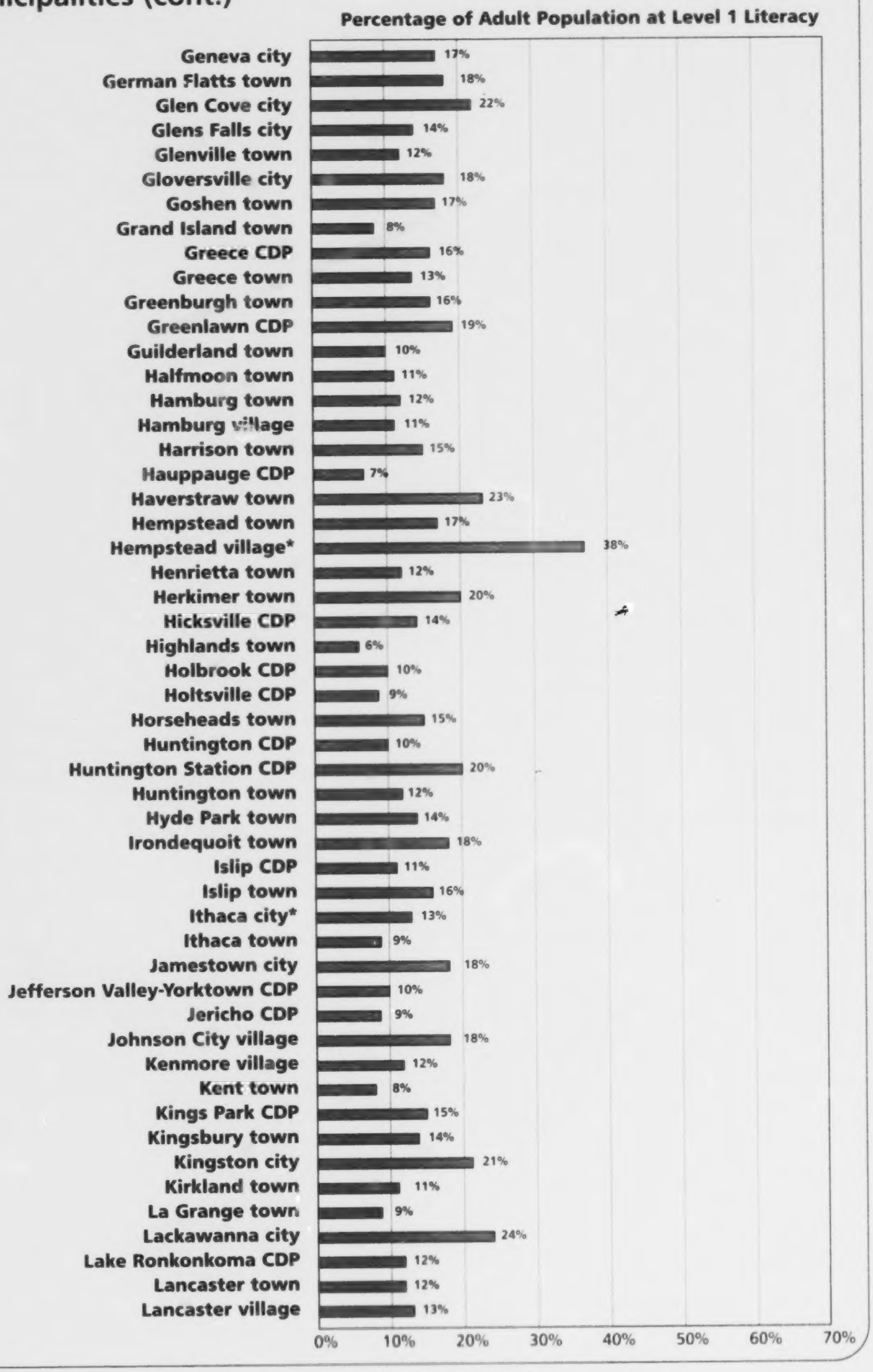
## Municipalities (cont.)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

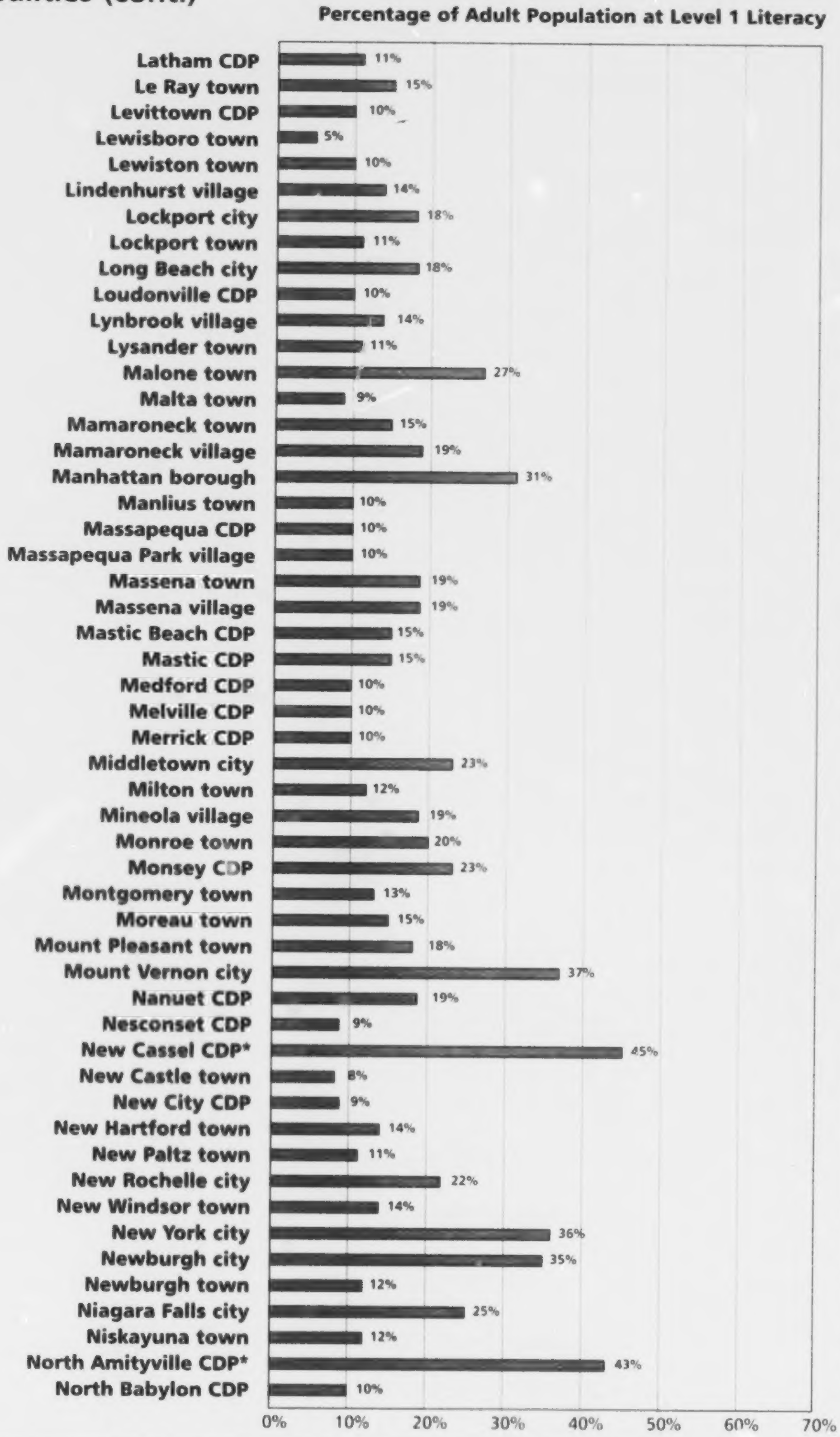
## Municipalities (cont.)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



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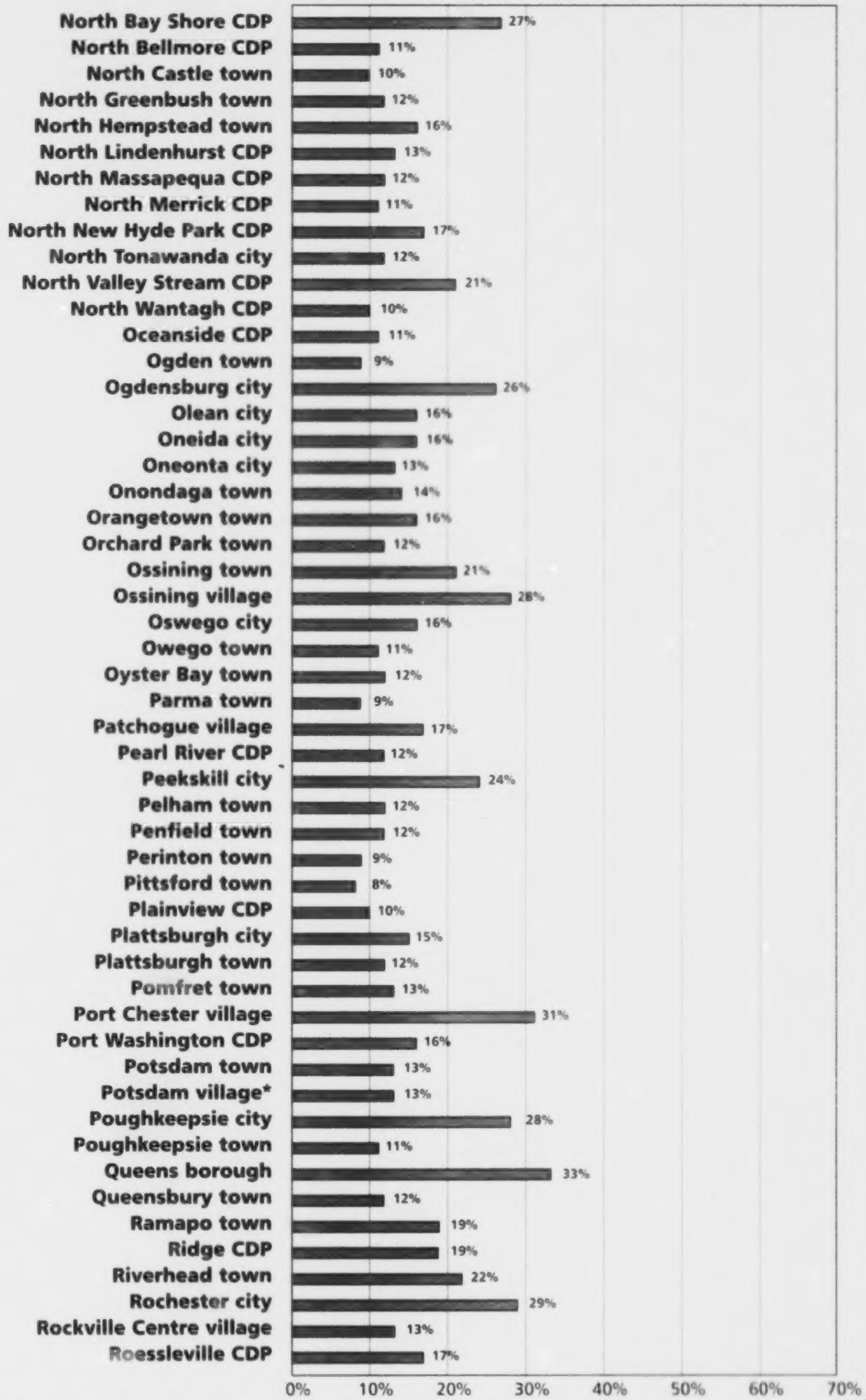
## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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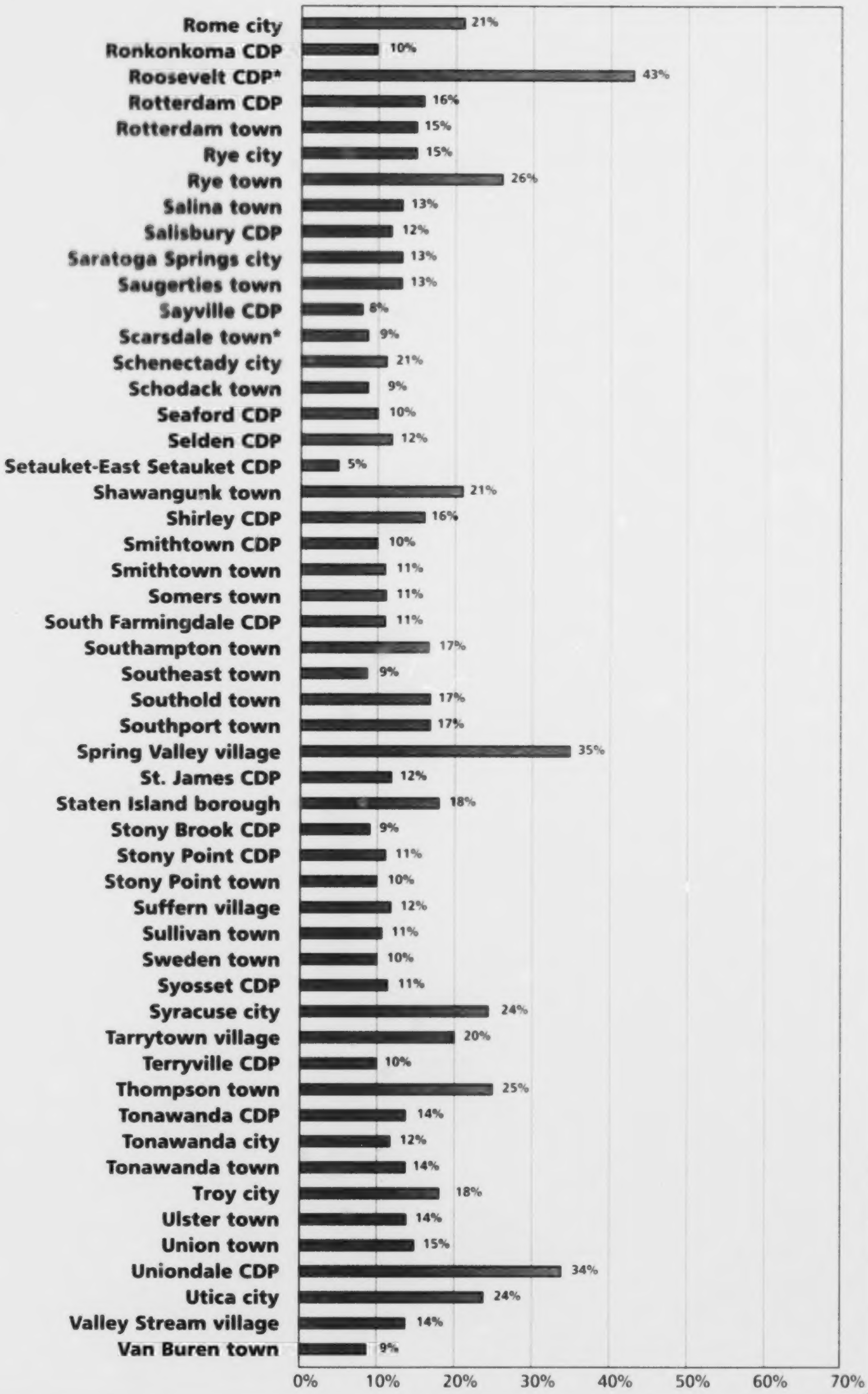
## Municipalities (cont.)



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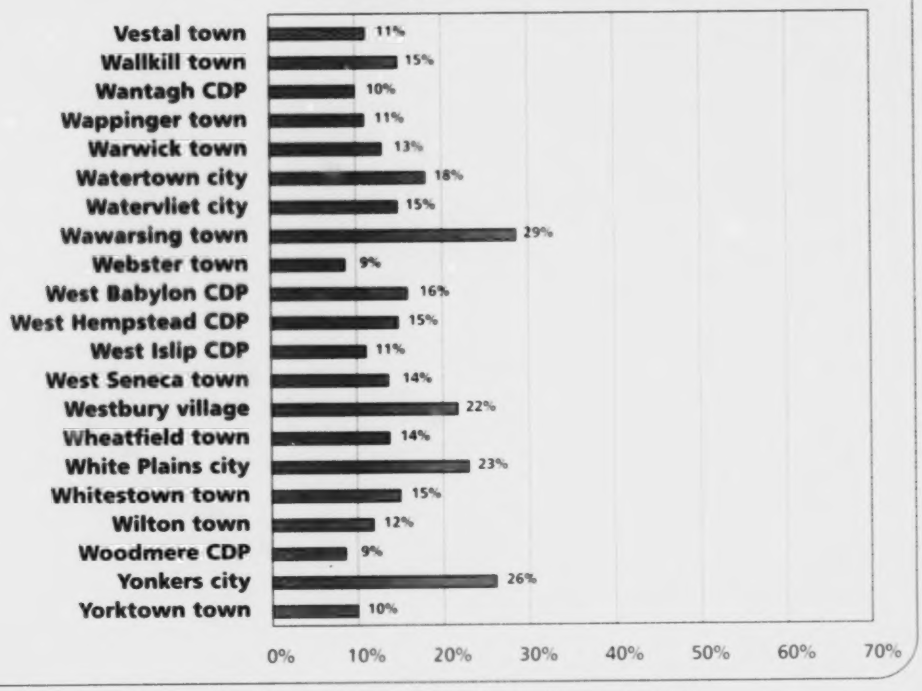
## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: New York

## Level 1 Adult Literacy Rates, by Congressional District

Source: U.S. Department of Education
Division of Adult Education and Literacy

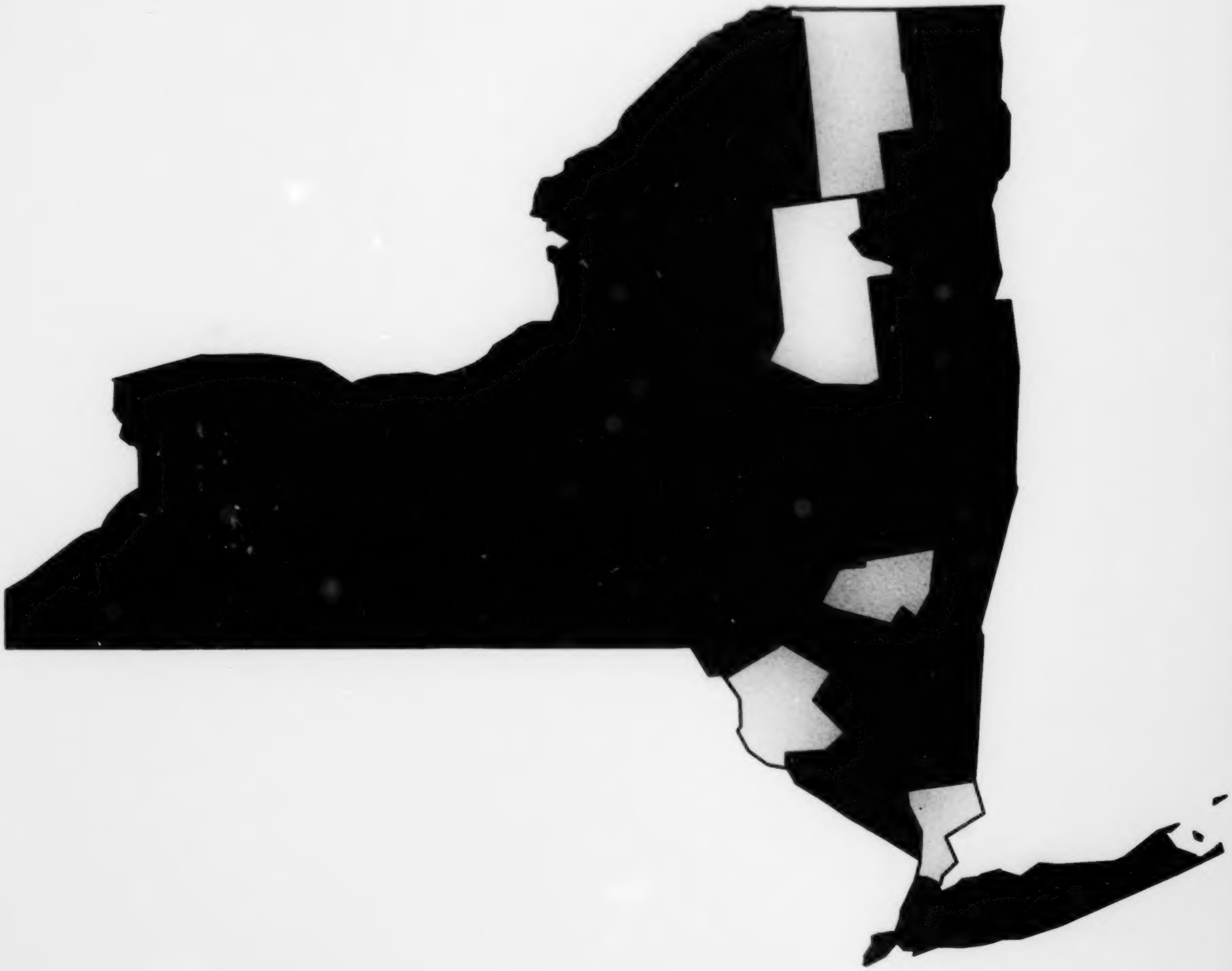
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

**Percentage of adult population with Level 1 Literacy skills**

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

# The State of Literacy in America: New York

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ■ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| ☐ | no estimate available | (14) |

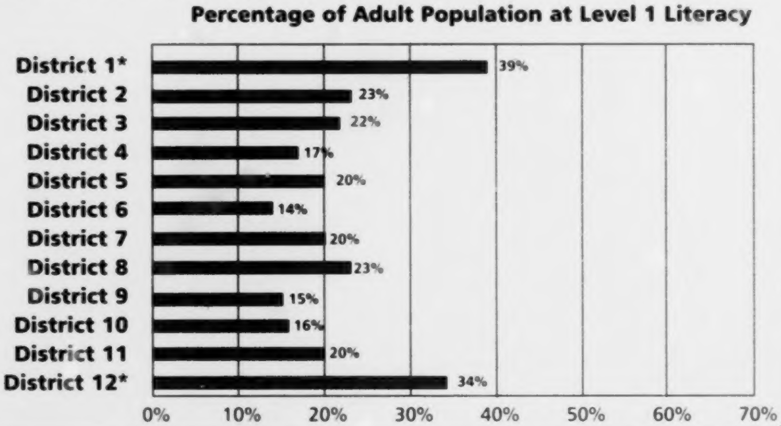
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

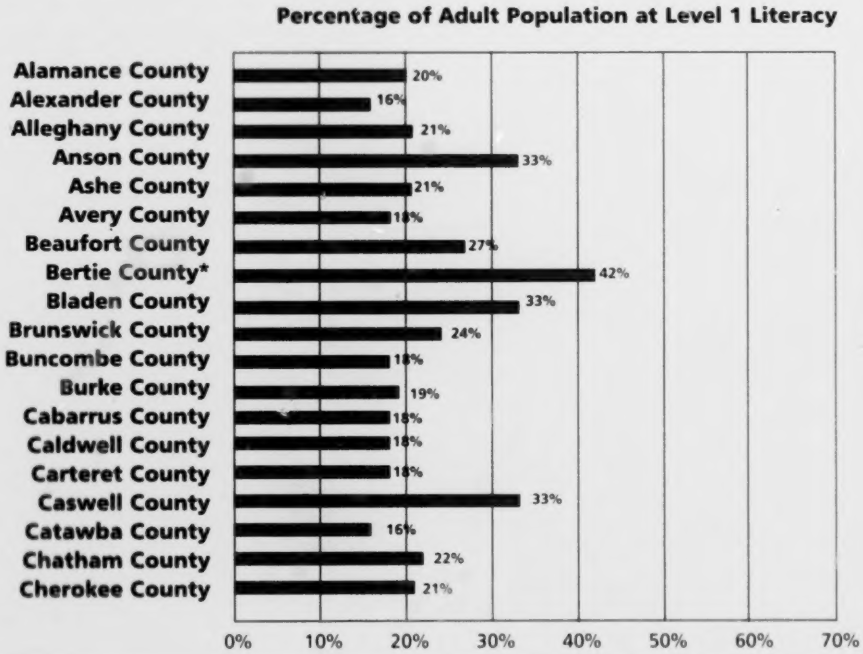
# North Carolina

## 22% of adult population is at Level 1 Literacy

### Congressional Districts (with adult population of at least 5,000)



### Counties (with adult population of at least 5,000)



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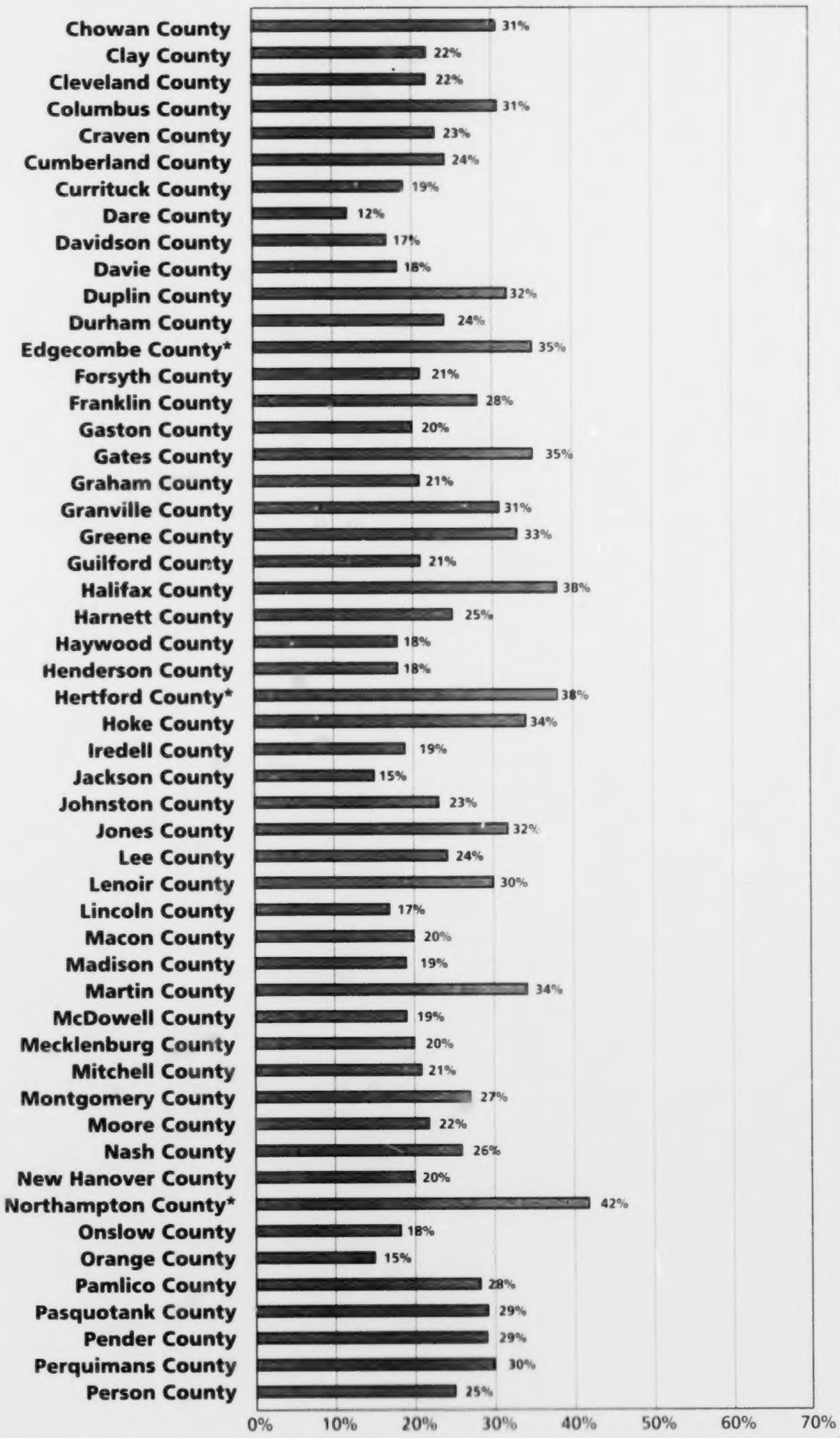
## Counties (cont.)

Percentage of Adult Population at Level 1 Literacy



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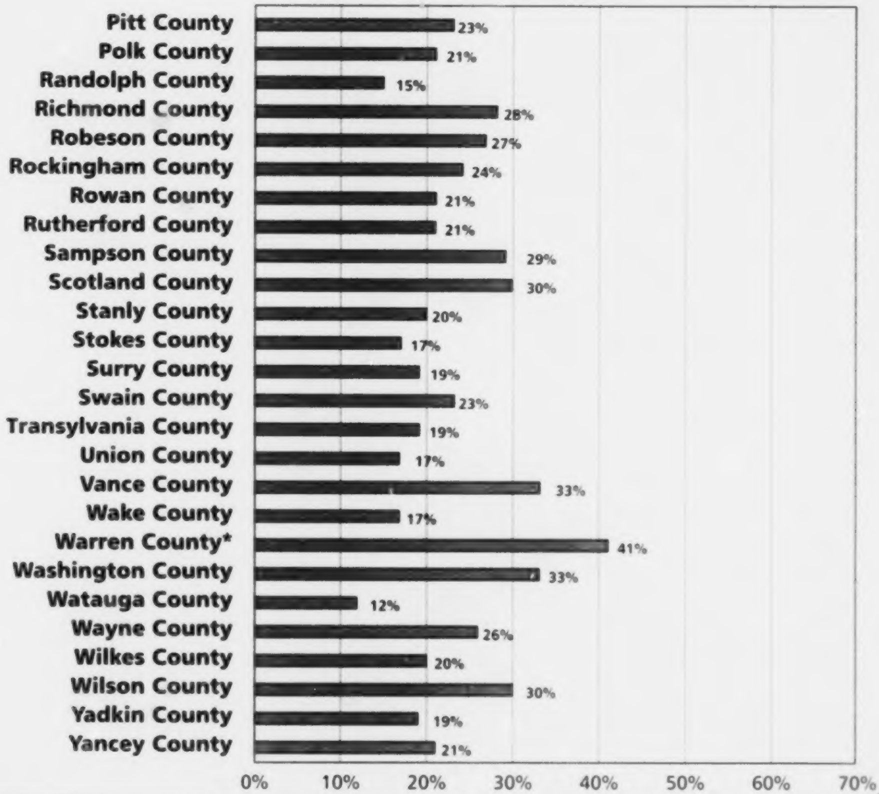
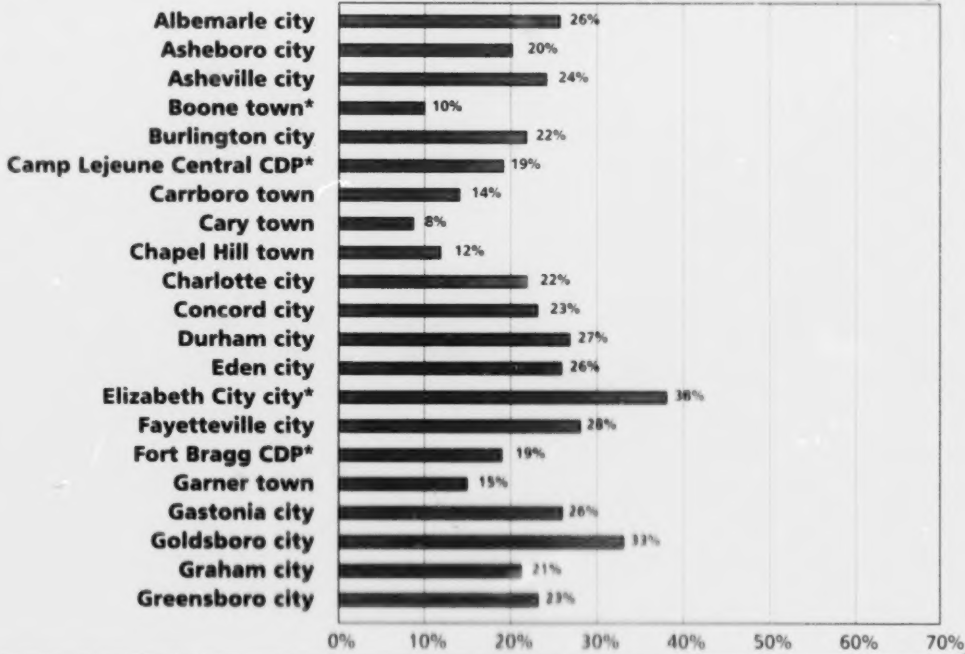
## Counties (cont.)

Percentage of Adult Population at Level 1 Literacy



## Municipalities (with adult populations of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



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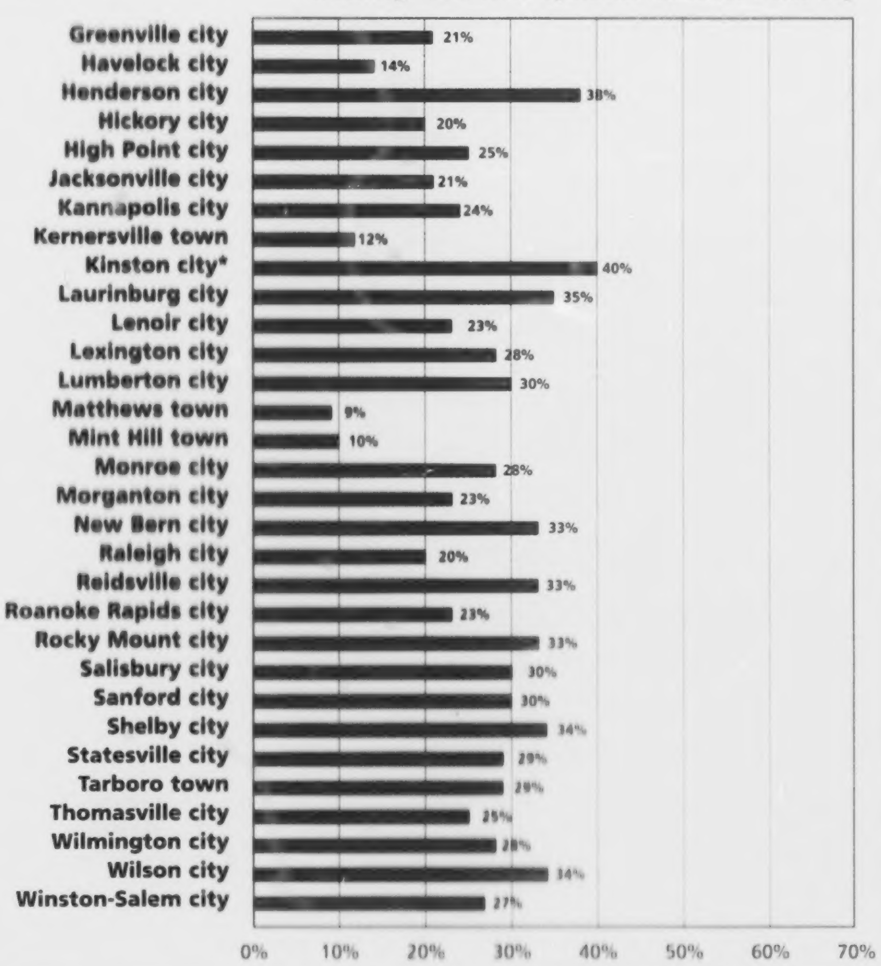
## Municipalities (cont.)


Percentage of Adult Population at Level 1 Literacy

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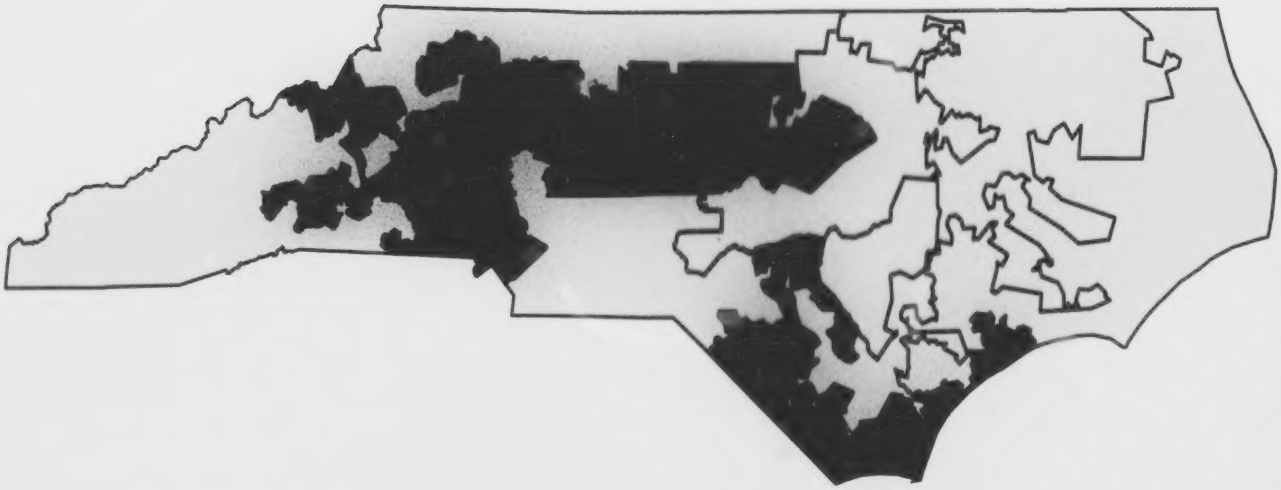
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: North Carolina

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

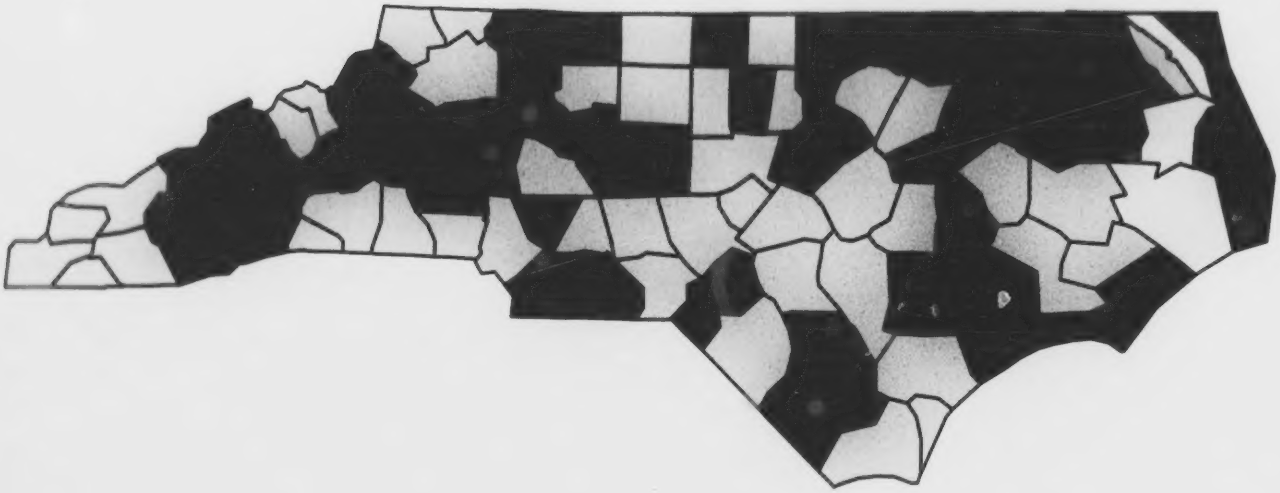
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: North Carolina

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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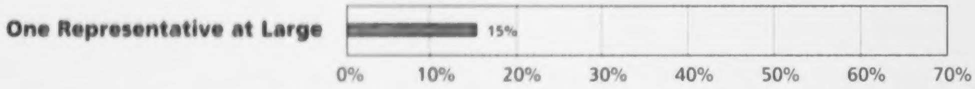
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# North Dakota

## 15% adult of population is at Level 1 Literacy

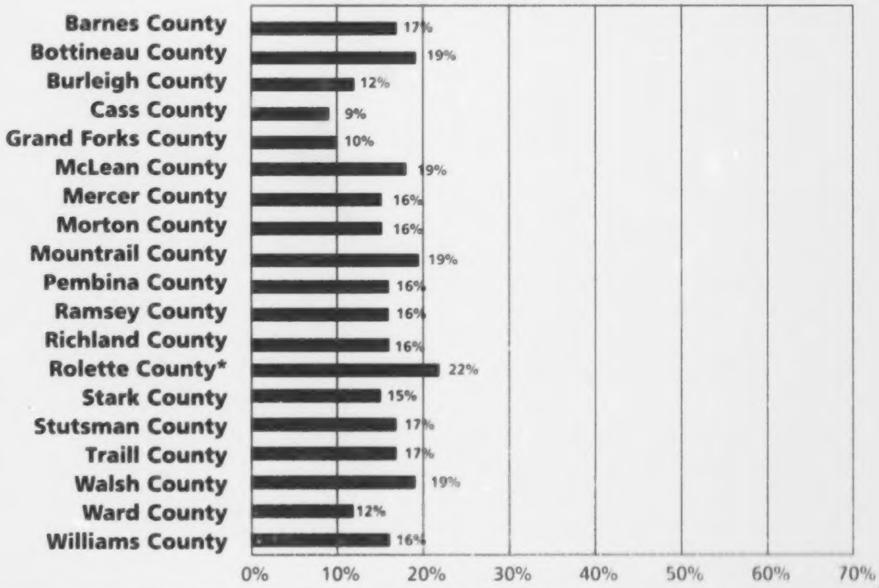
### Congressional Districts

Percentage of Adult Population at Level 1 Literacy



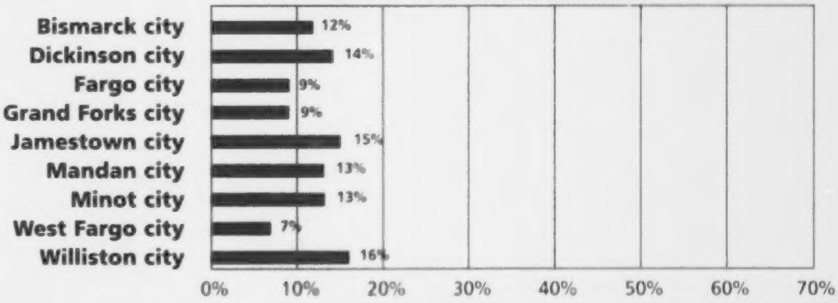
### Counties (with adult population of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



### Municipalities (with adult population of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



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# The State of Literacy in America: North Dakota

## Level 1 Adult Literacy Rates, by Congressional District

Source: U.S. Department of Education
Division of Adult Education and Literacy

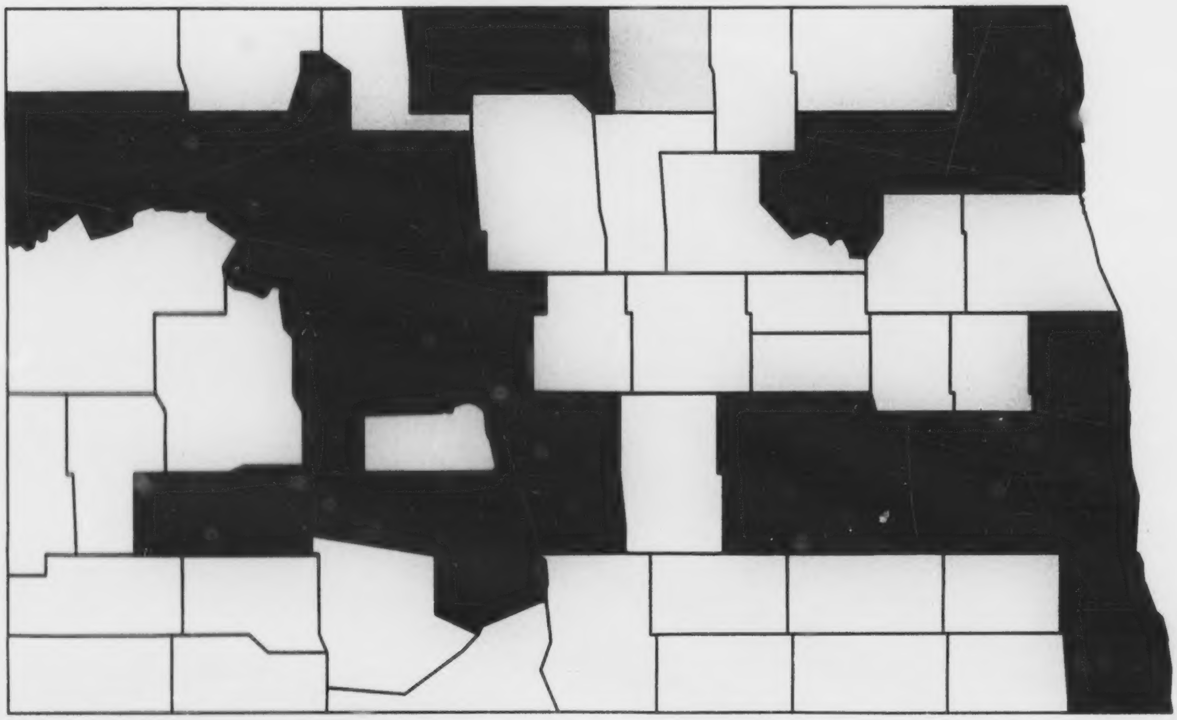
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

# The State of Literacy in America: North Dakota

## Level 1 Adult Literacy Rates, by County



Source: U.S. Department of Education
Division of Adult Education and Literacy

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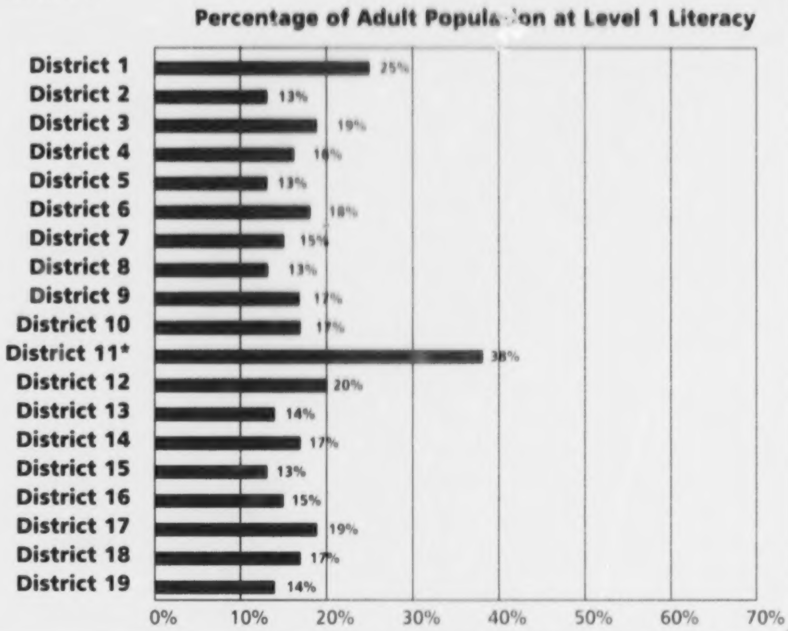
Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

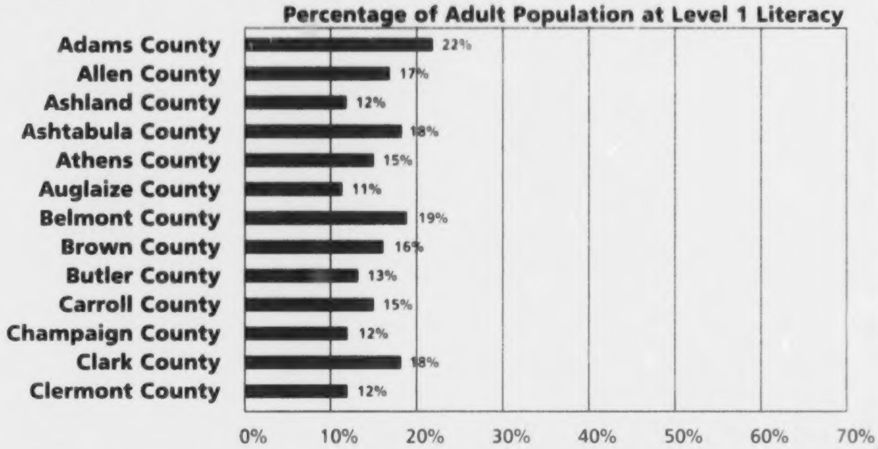
# Ohio

## 18% of adult population is at Level 1 Literacy

## Congressional Districts



## Counties (with adult populations of at least 5,000)



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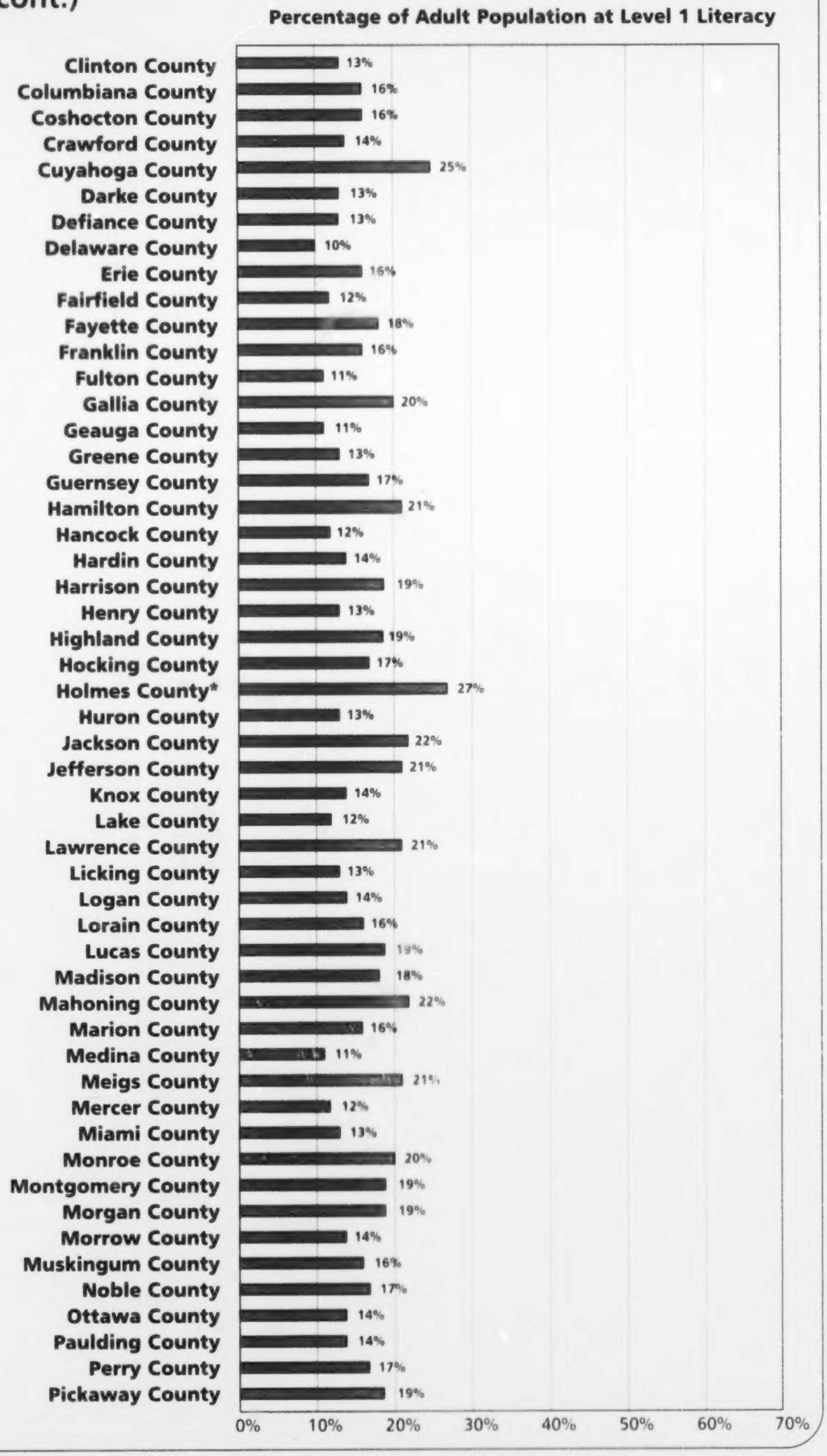
**Ohio**

## Counties (cont.)



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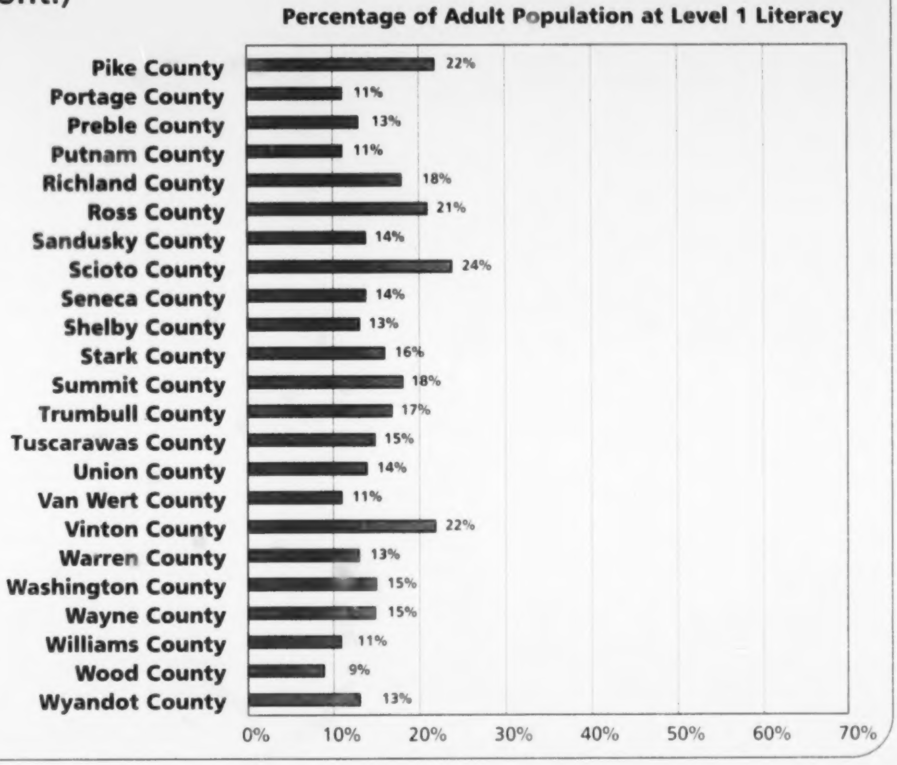
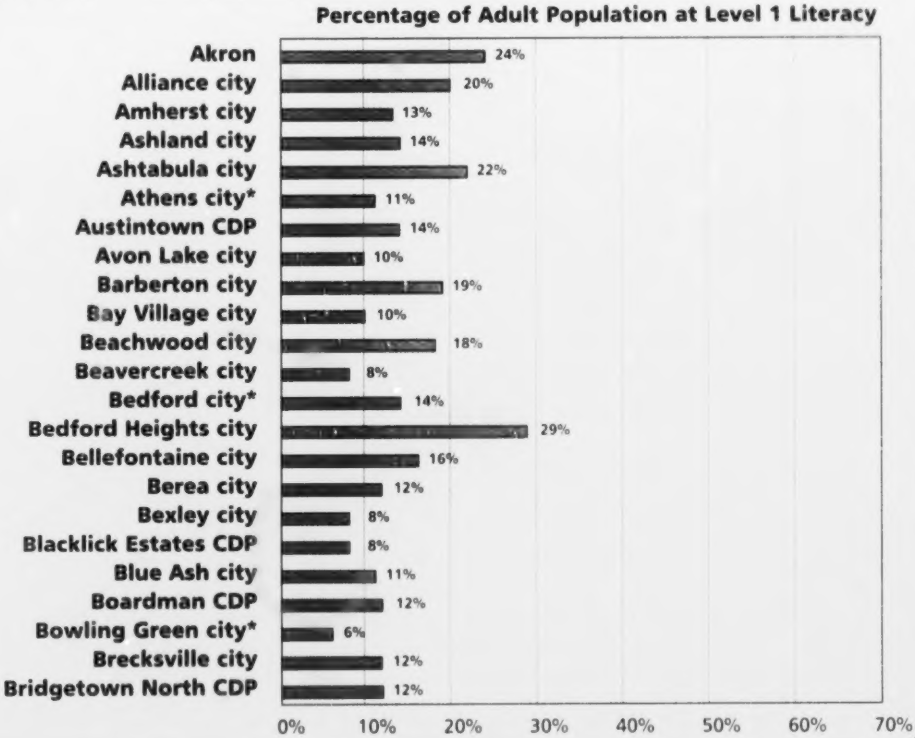
## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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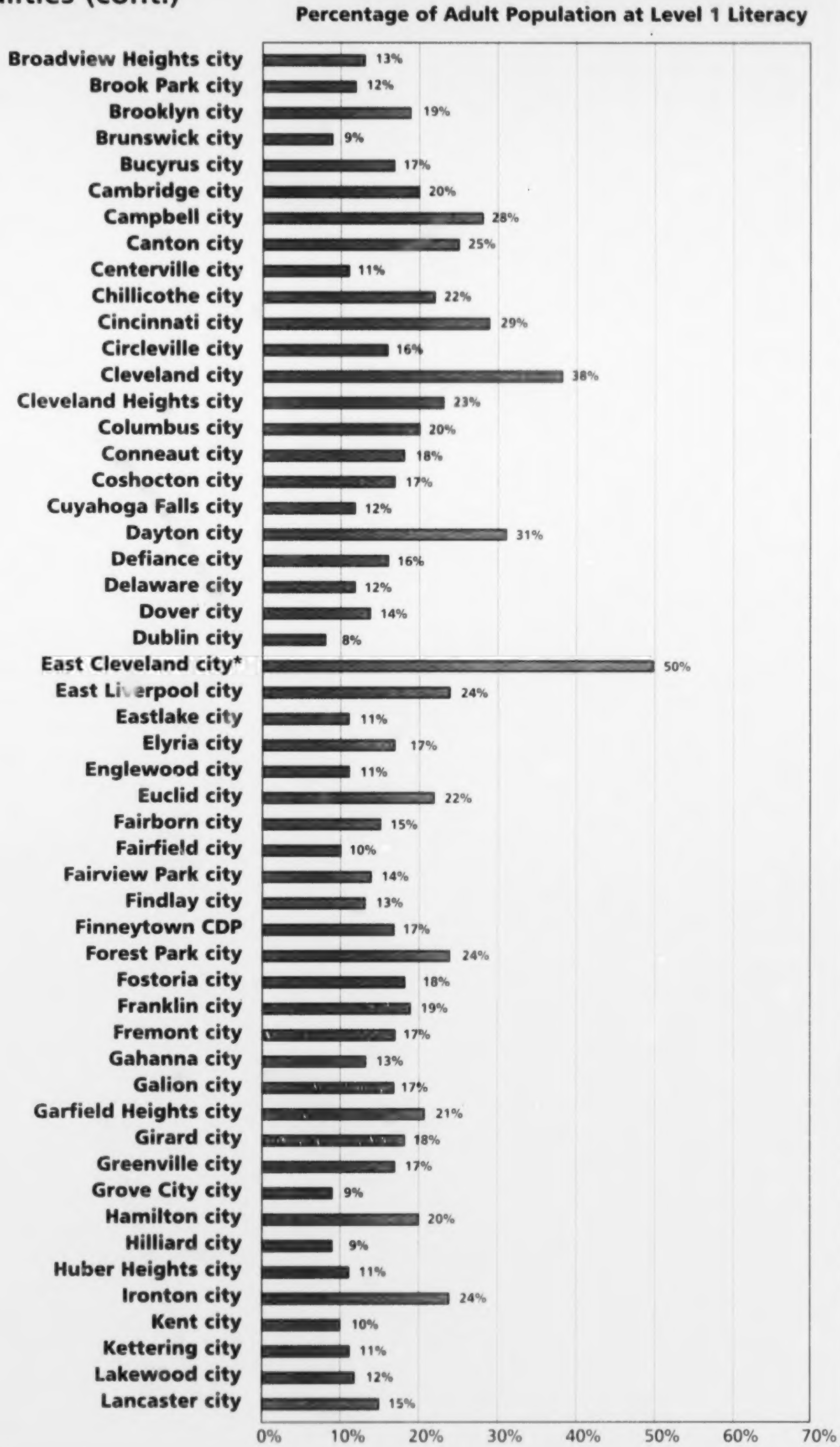
## Municipalities (cont.)



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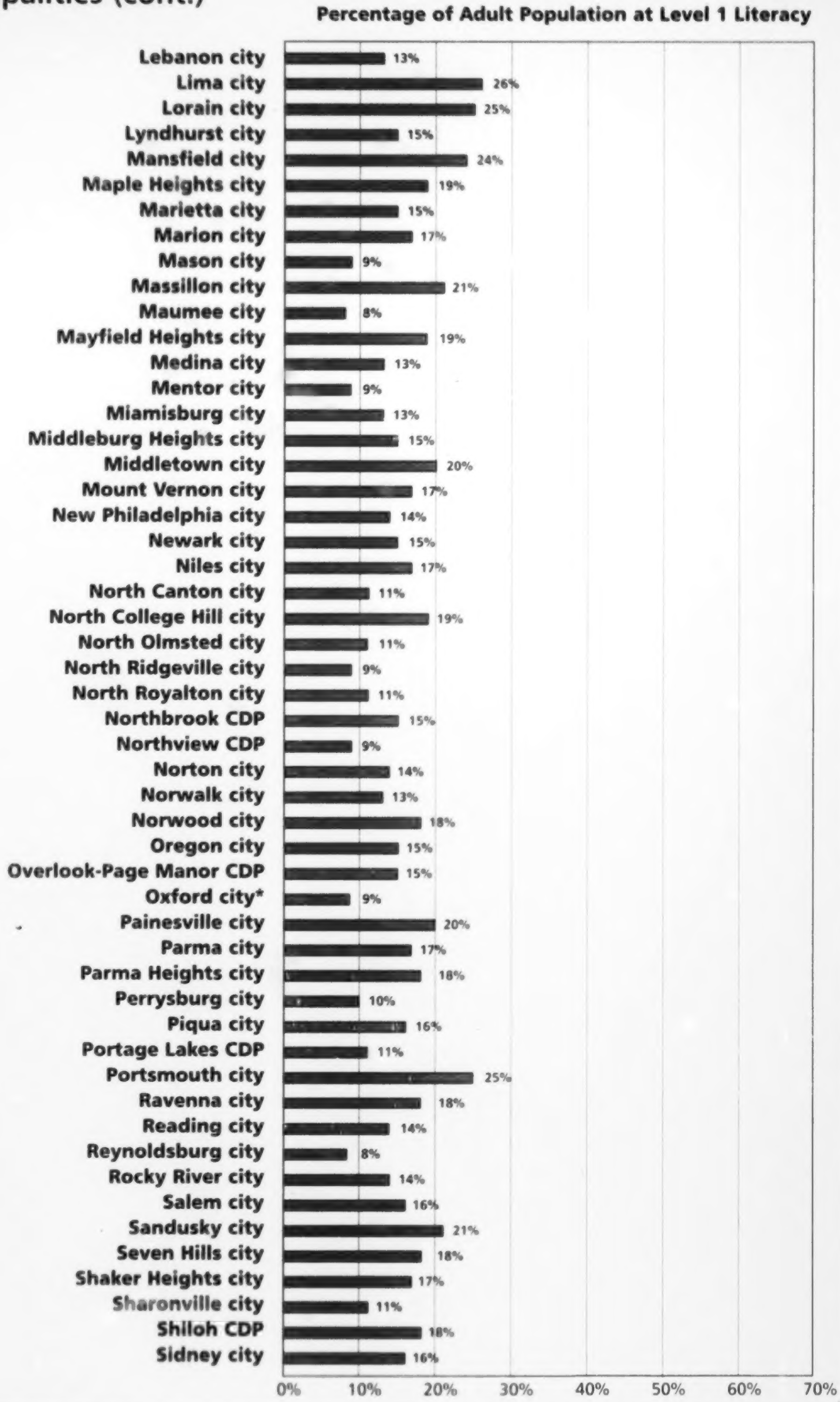
## Municipalities (cont.)



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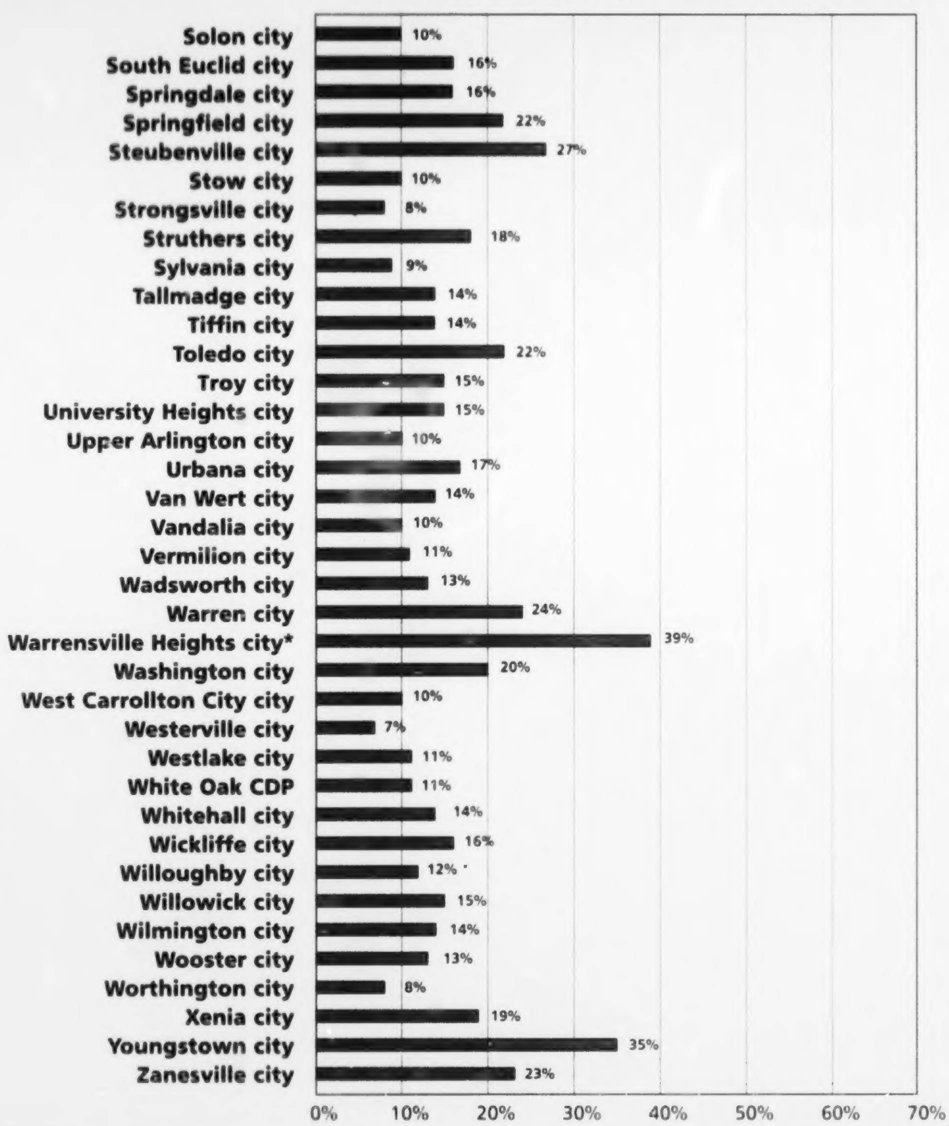
## Municipalities (cont.)


Percentage of Adult Population at Level 1 Literacy

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# The State of Literacy in America: Ohio

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

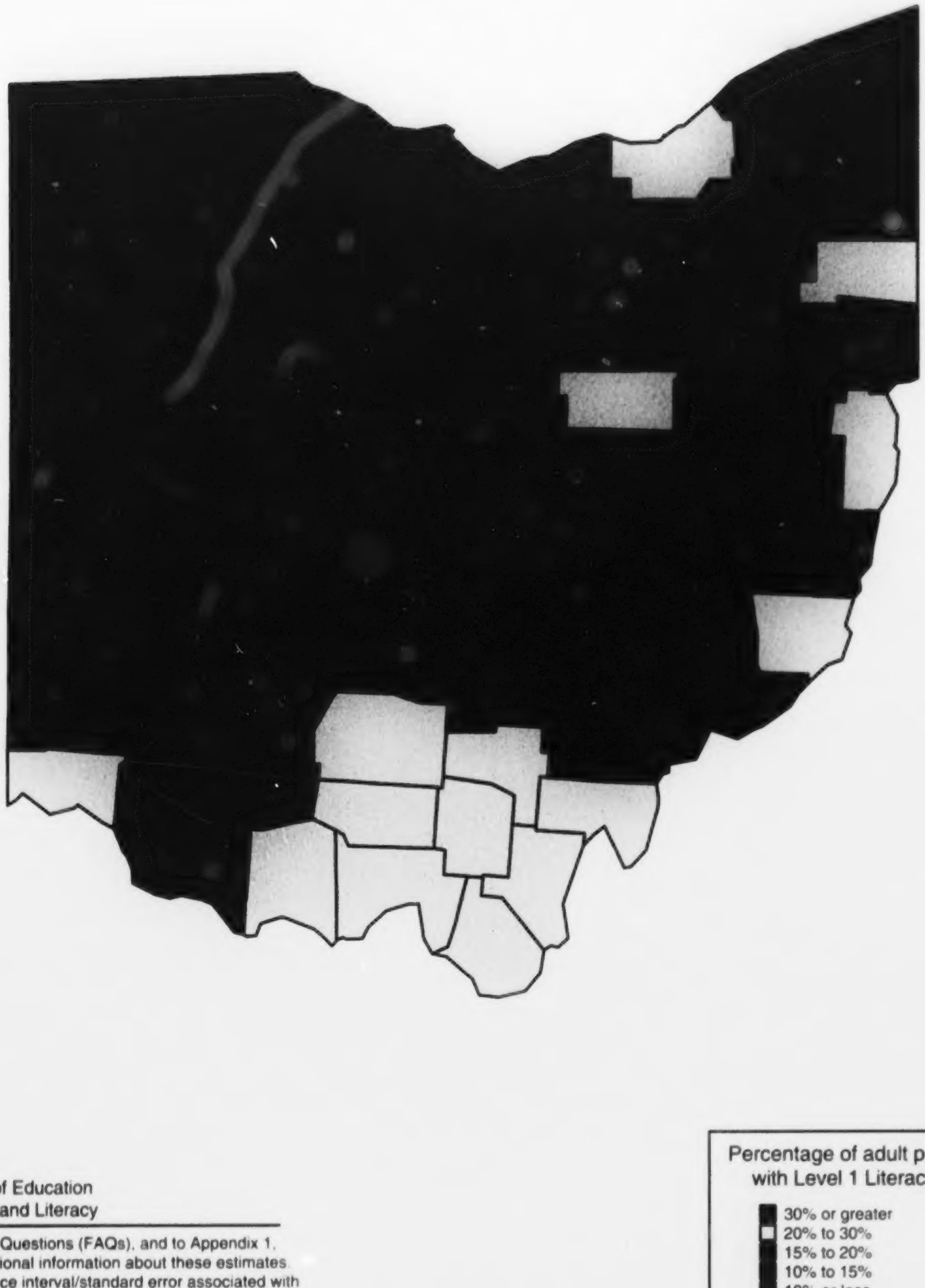
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Ohio

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

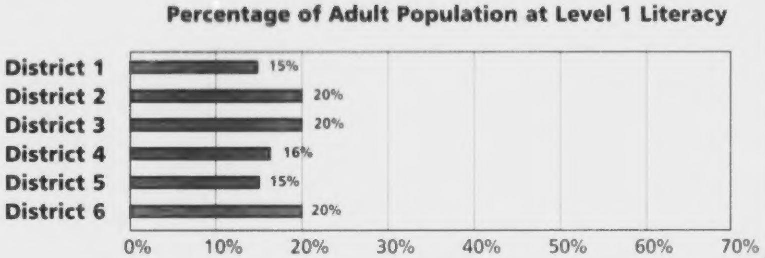
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

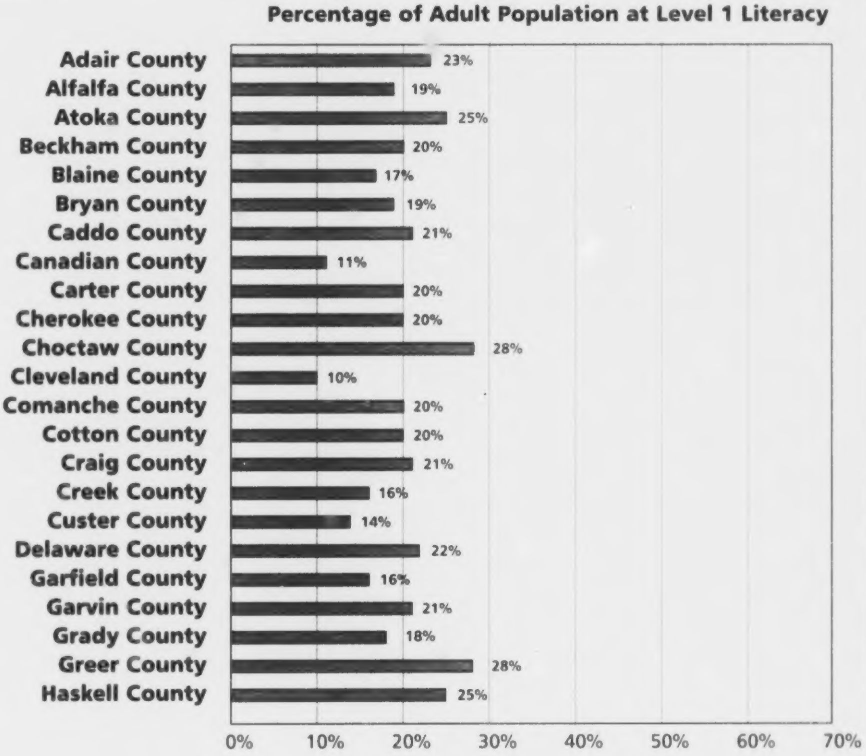
# Oklahoma

## 18% of population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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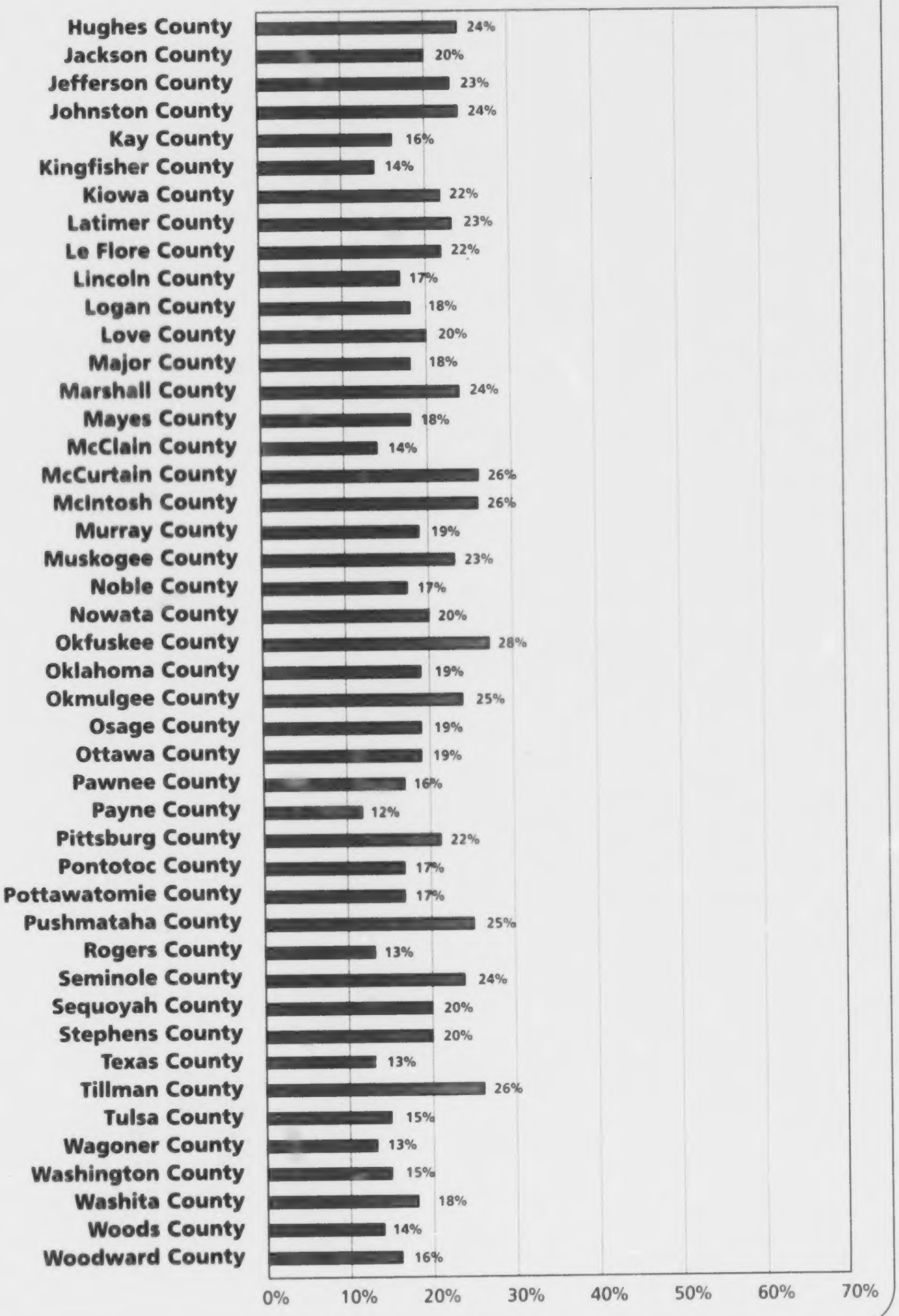
## Counties (cont.)



Percentage of Adult Population at Level 1 Literacy

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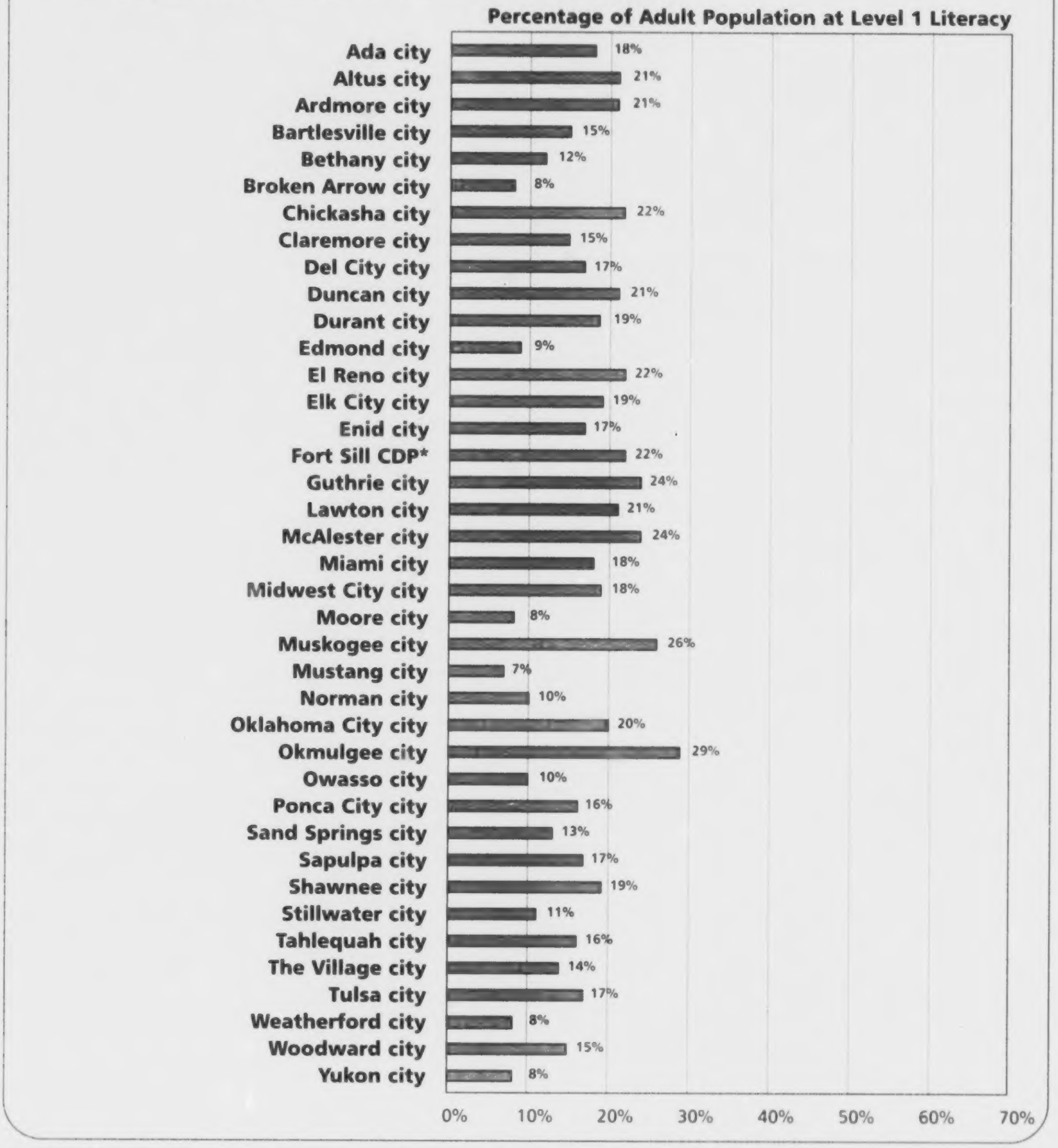
## Municipalities (with adult populations of at least 5,000)



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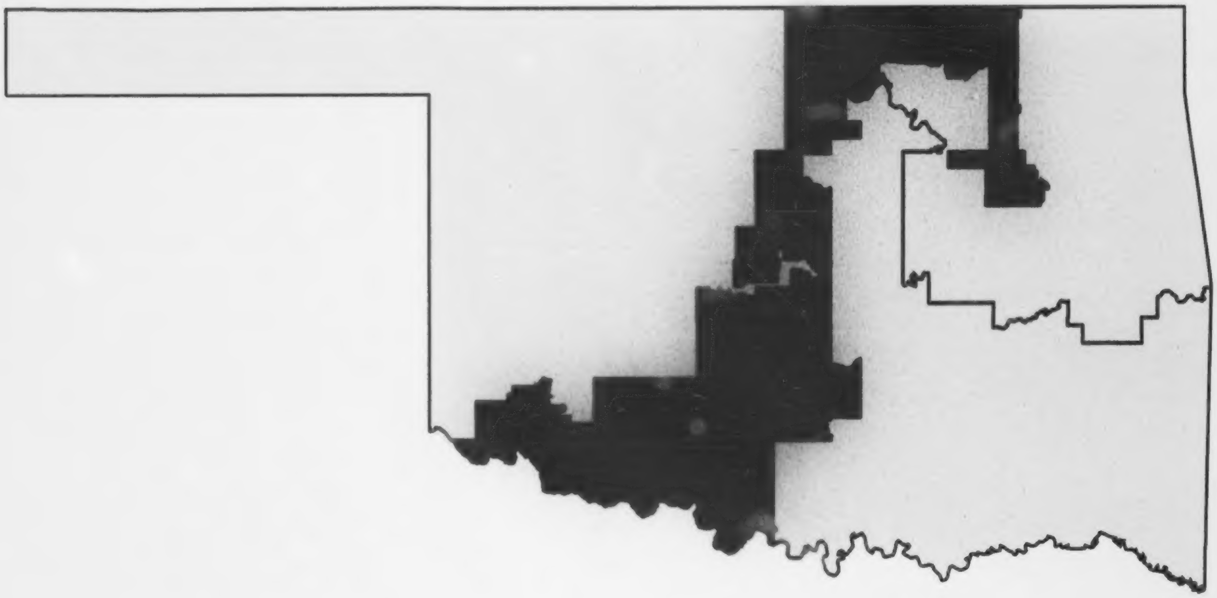
# The State of Literacy in America: Oklahoma

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

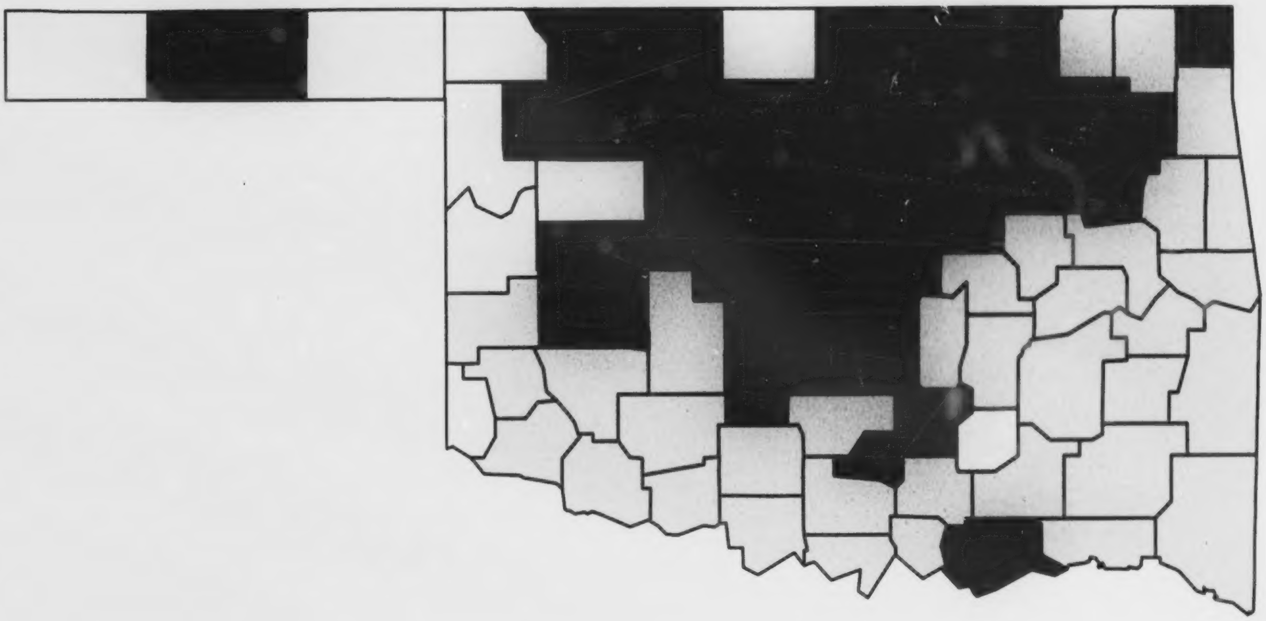
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Oklahoma

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

- ■ 30% or greater (1)
- □ 20% to 30% (1)
- ■ 15% to 20% (1)
- ■ 10% to 15% (4)
- ■ 10% or less (6)
- □ no estimate available (14)

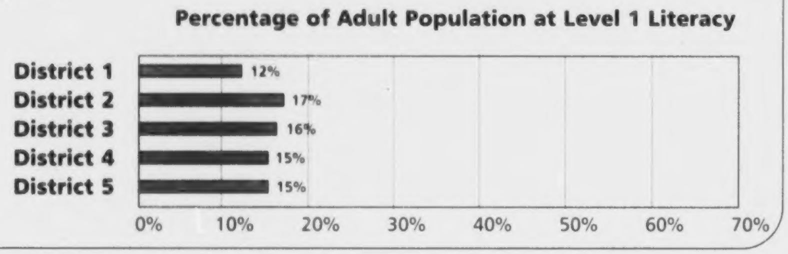
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

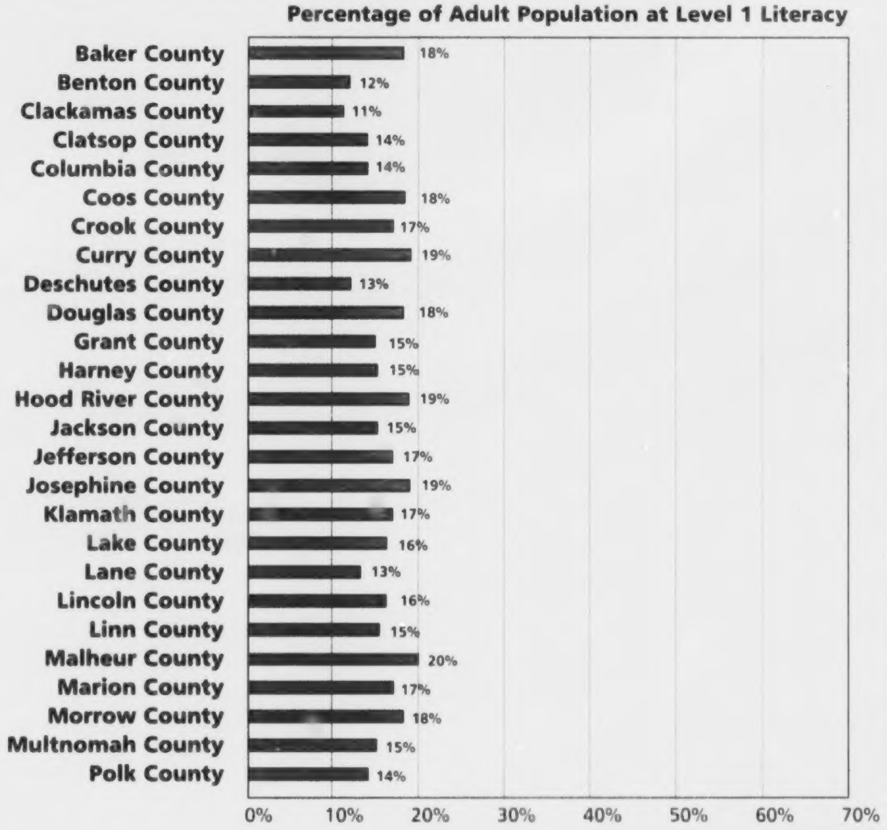
# Oregon

## 15% of adult population is at Level 1 Literacy

### Congressional Districts



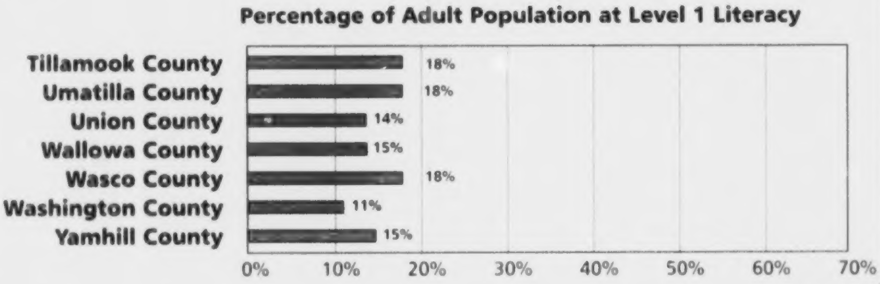
### Counties (with adult populations of at least 5,000)



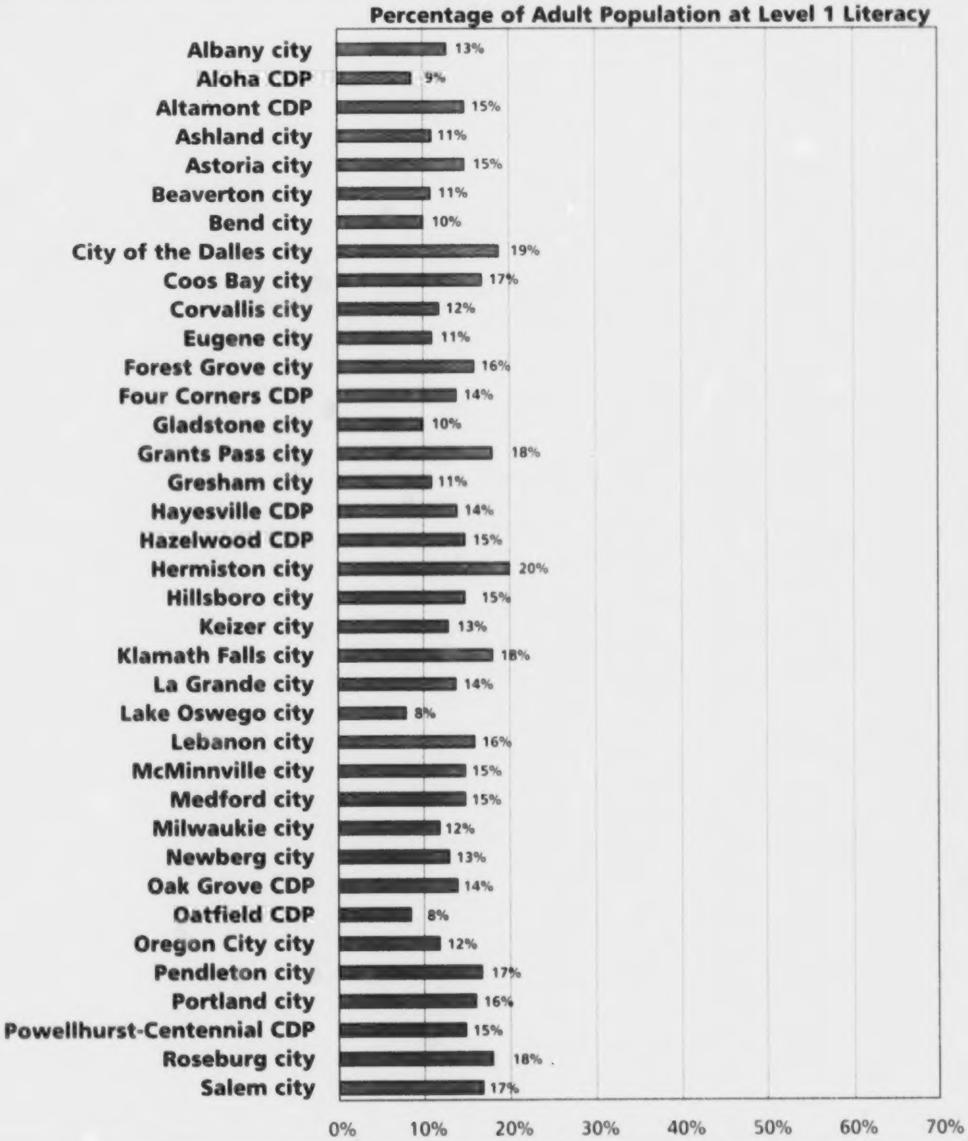
* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



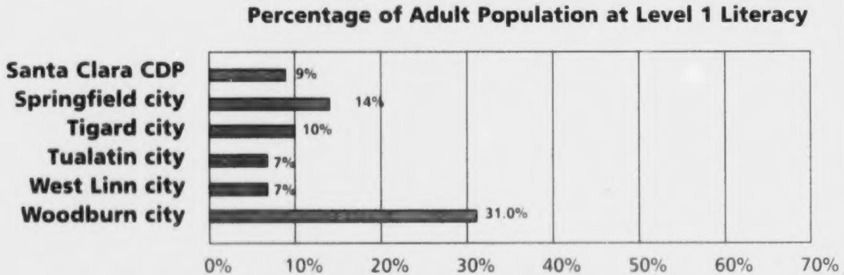
## Municipalities (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

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# The State of Literacy in America: Oregon

## Level 1 Adult Literacy Rates, by Congressional District

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

# The State of Literacy in America: Oregon

## Level 1 Adult Literacy Rates, by County

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

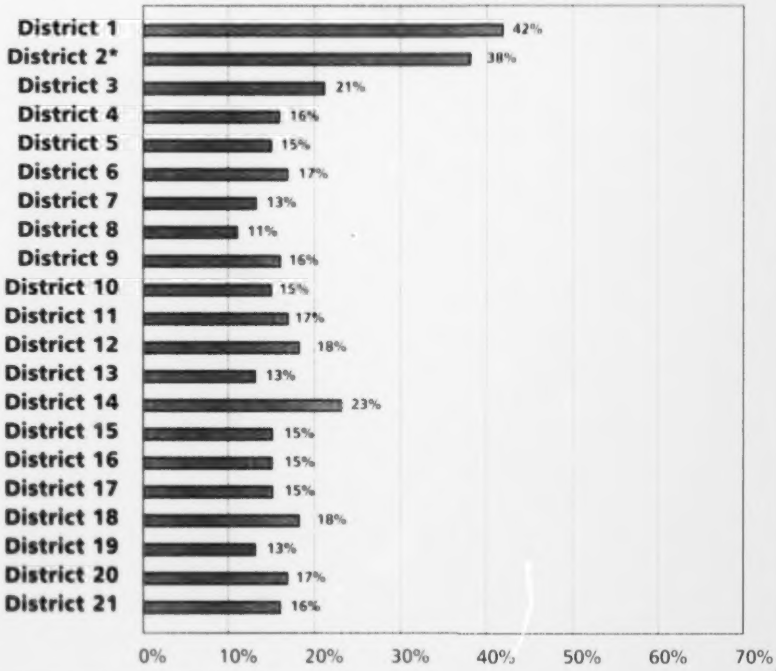
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# Pennsylvania

## 19% of adult population is at Level 1 Literacy

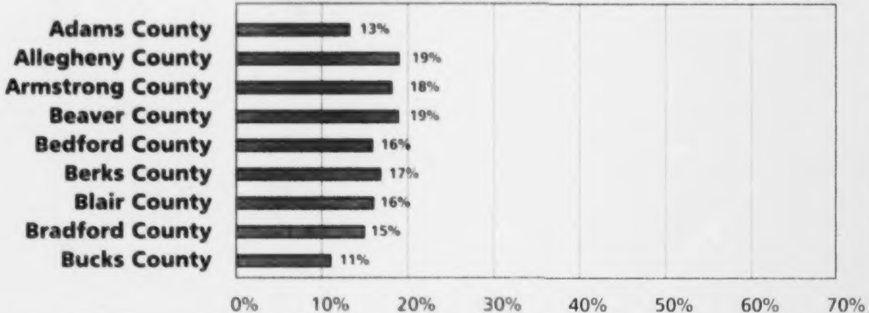
### Congressional Districts

Percentage of Adult Population at Level 1 Literacy



### Counties (with adult populations of at least 5,000)

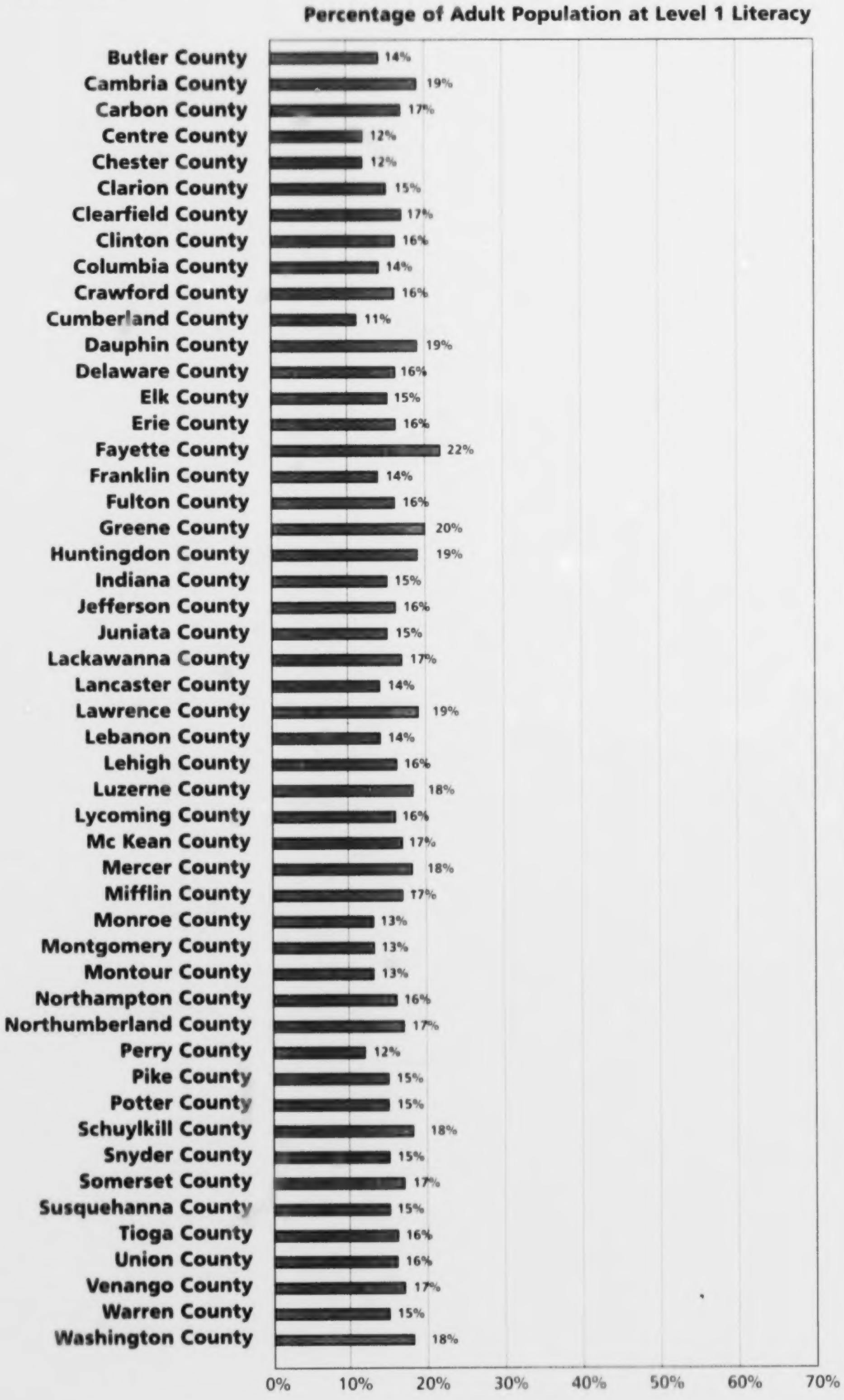
Percentage of Adult Population at Level 1 Literacy



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



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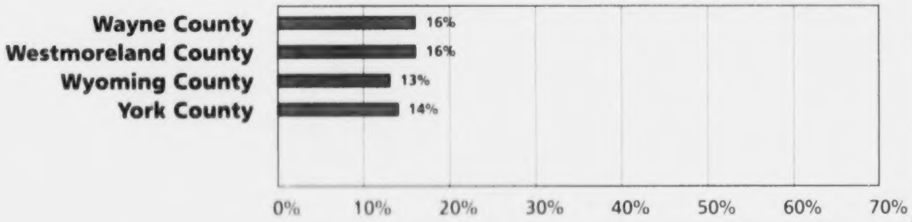
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

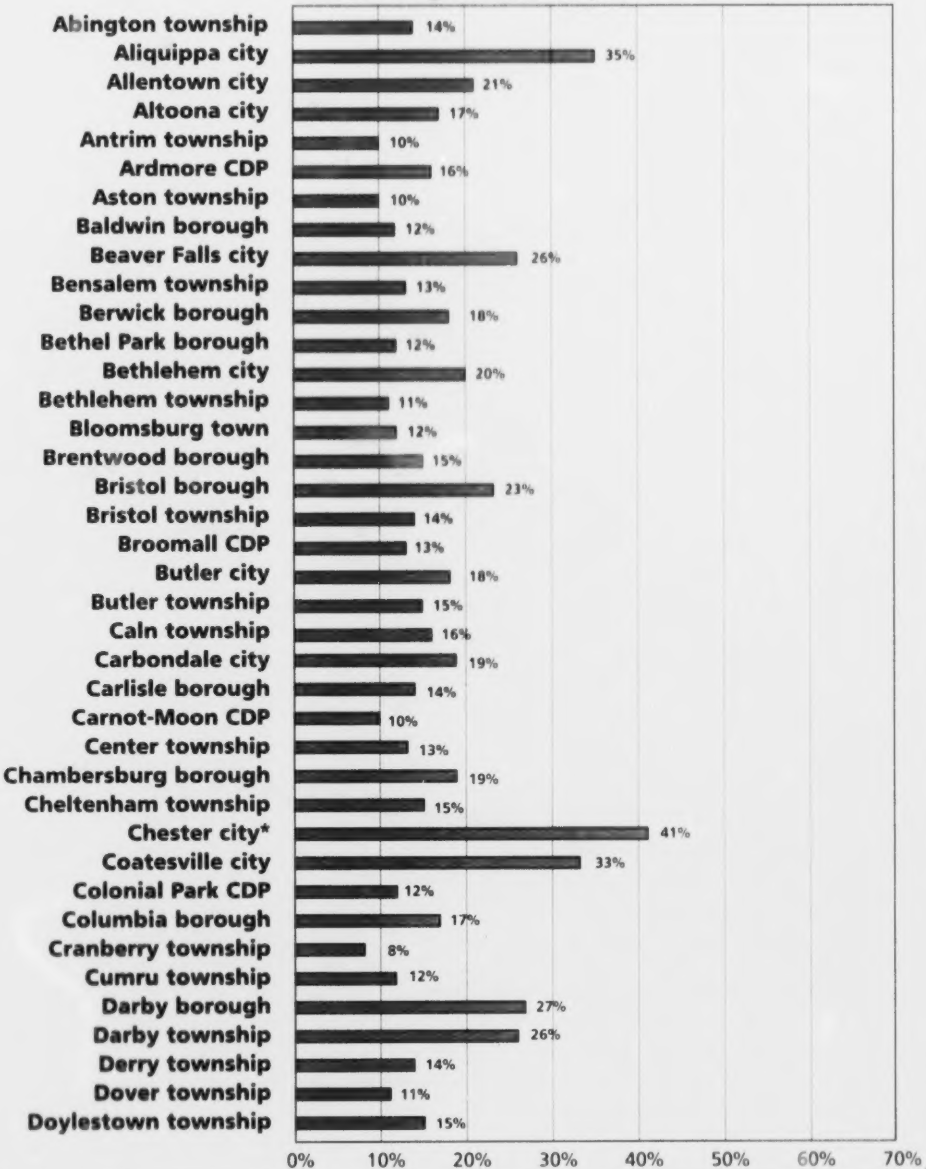
## Counties (cont.)

Percentage of Adult Population at Level 1 Literacy



## Municipalities (with adult populations of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



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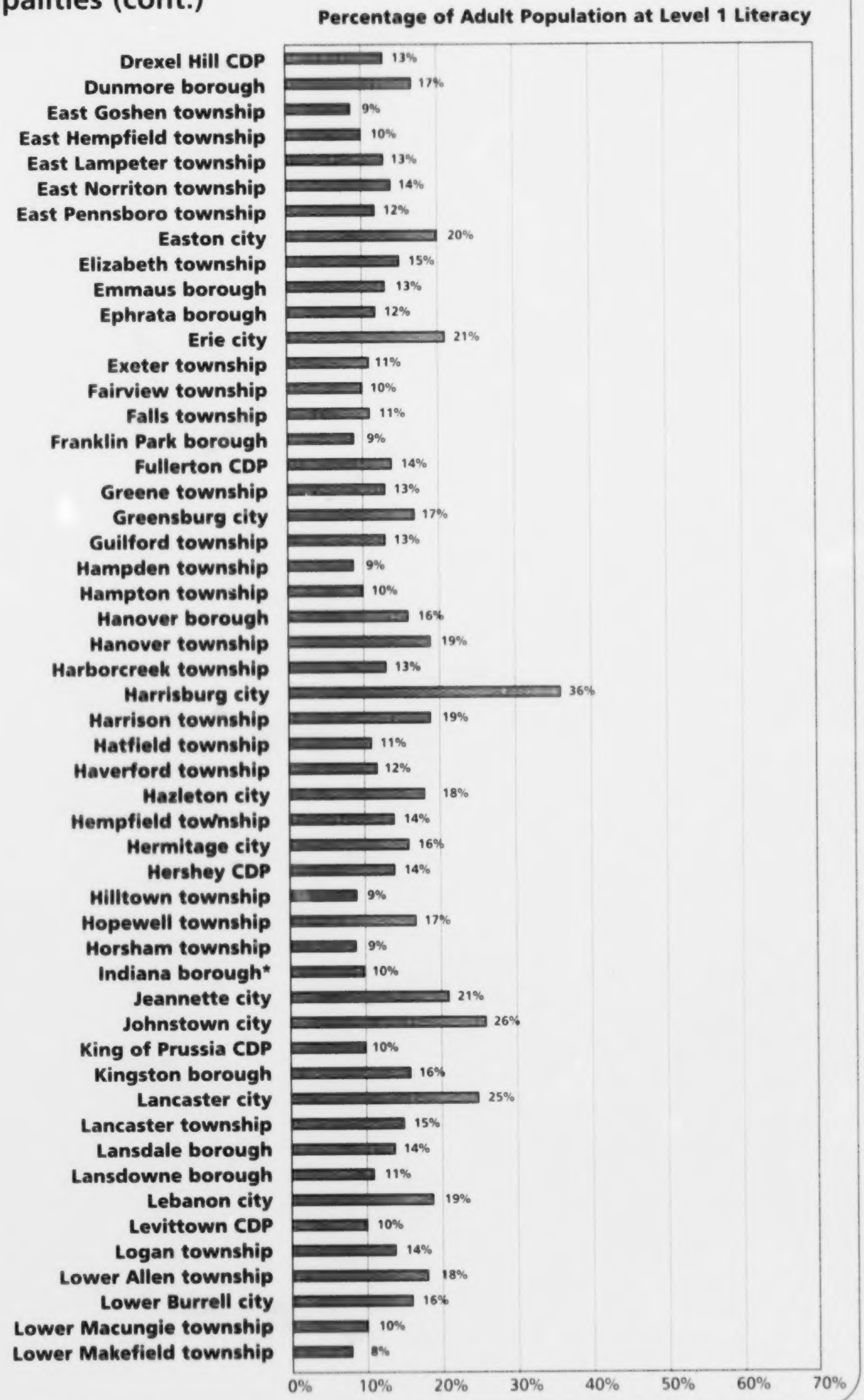
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



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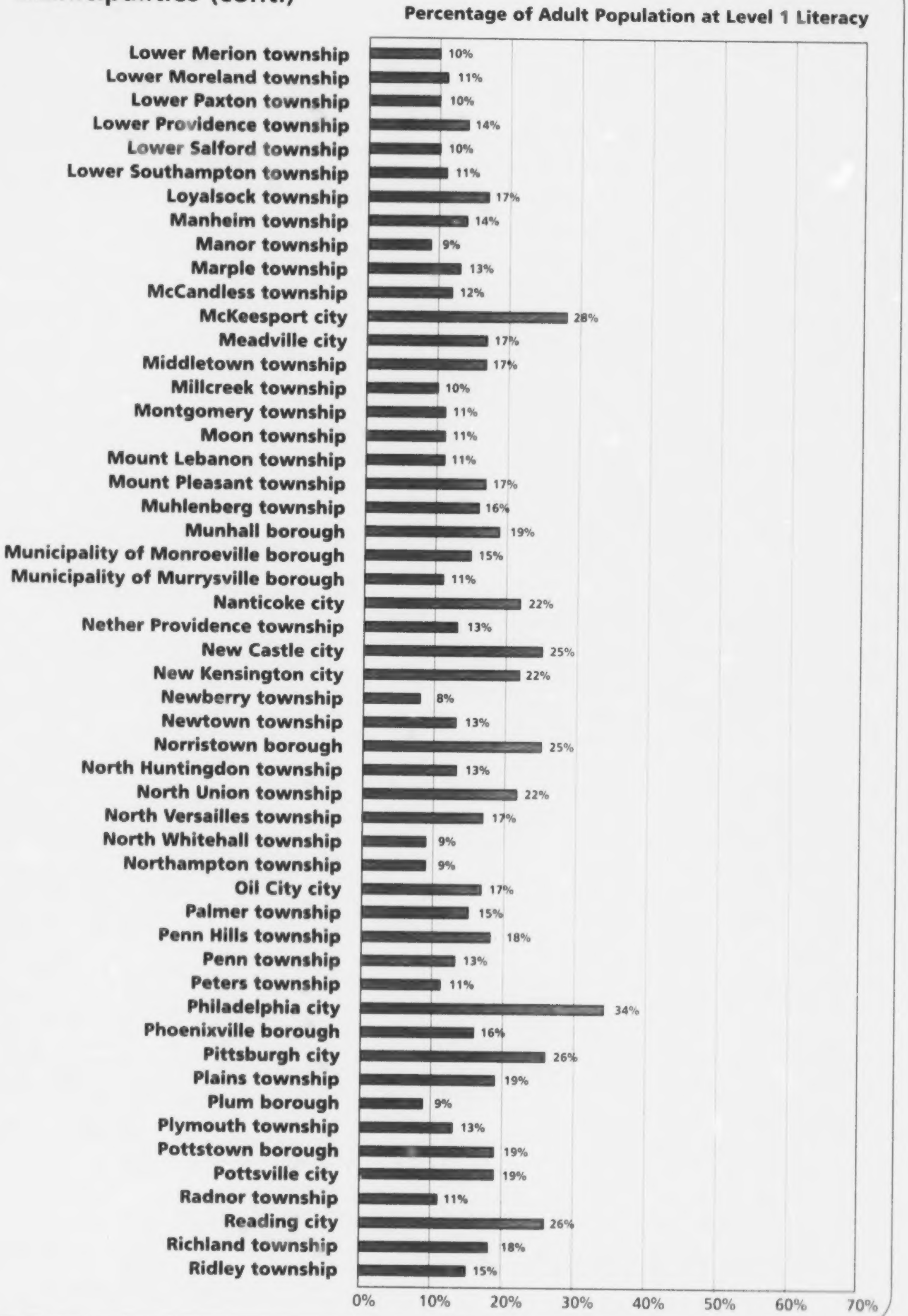
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)

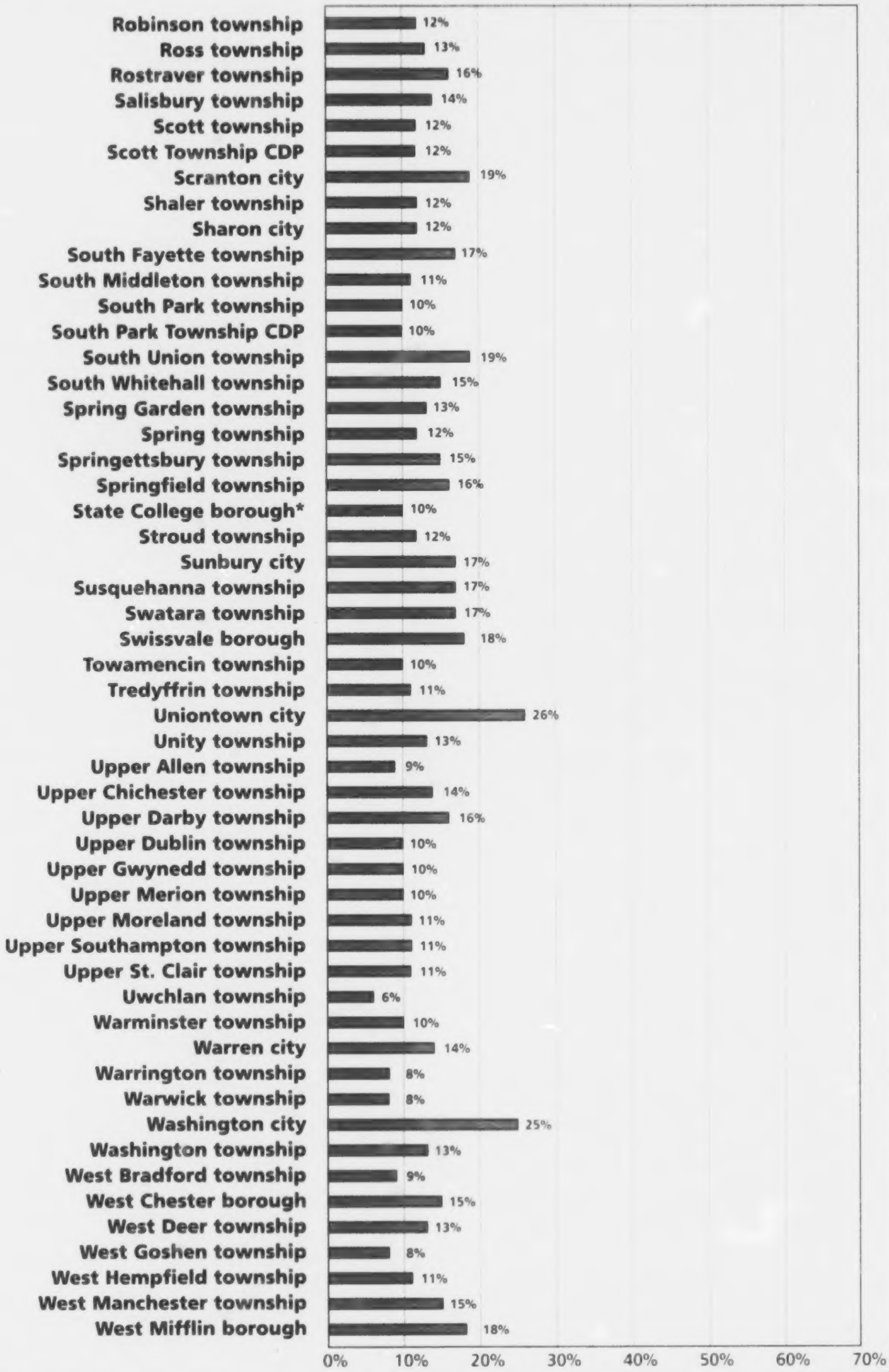


* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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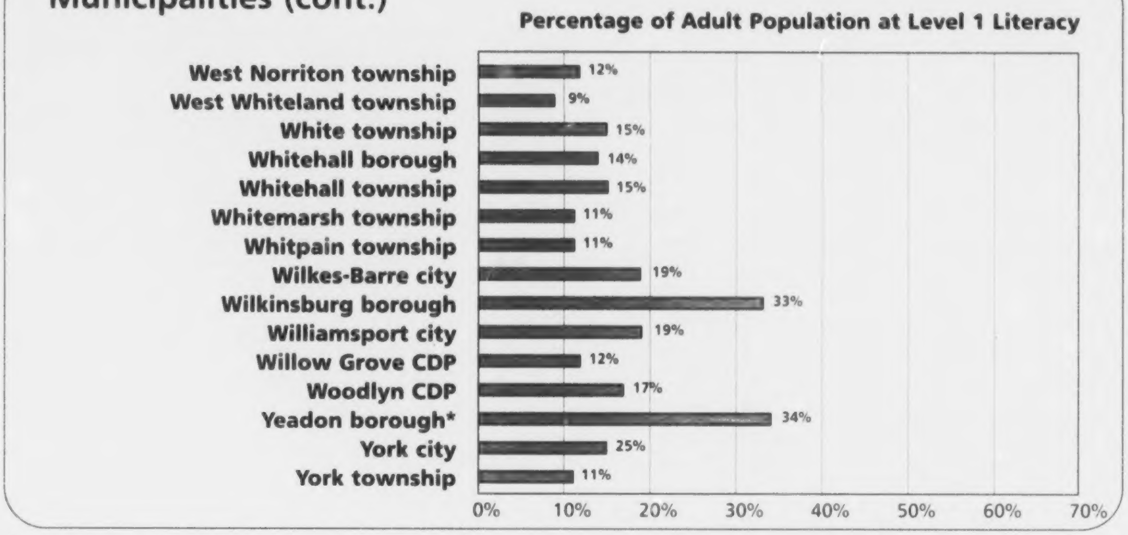
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov)

## Municipalities (cont.)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

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# The State of Literacy in America: Pennsylvania

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

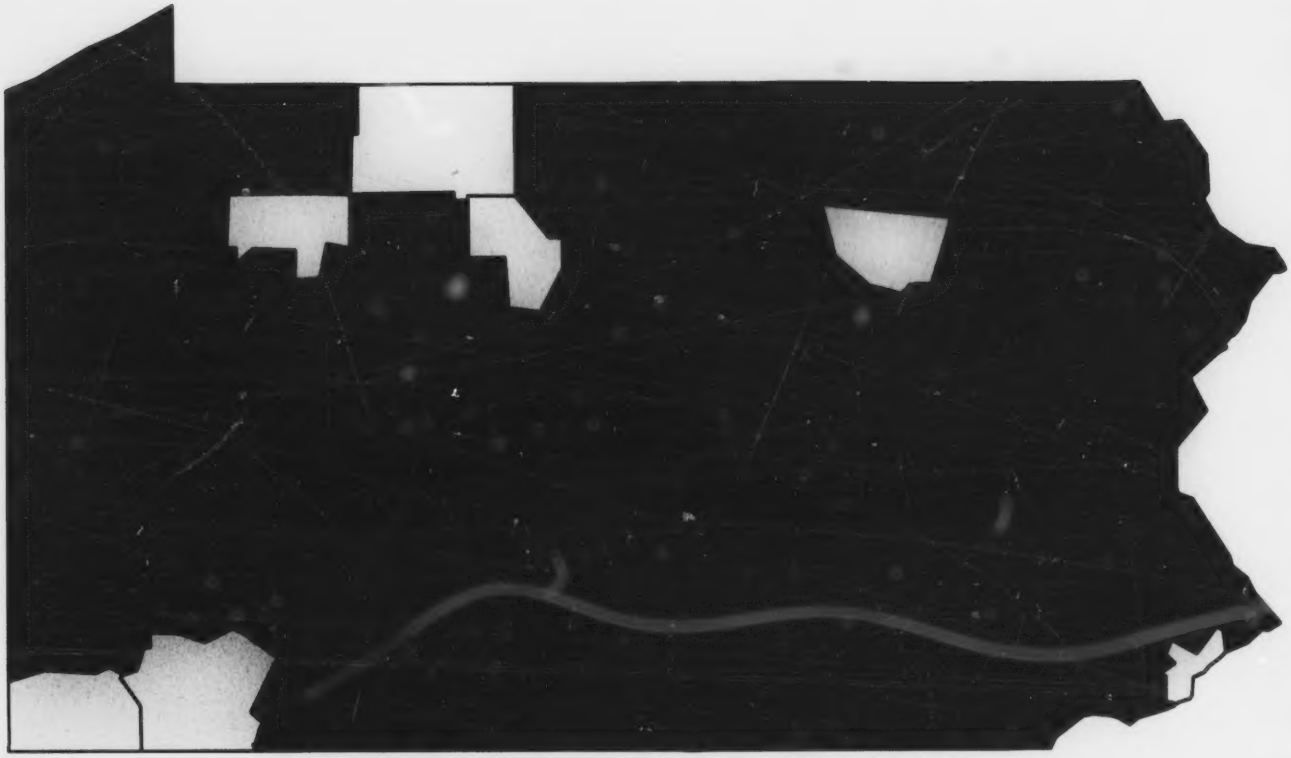
■ 30% or greater (1)
□ 20% to 30% (1)
■ 15% to 20% (1)
■ 10% to 15% (4)
■ 10% or less (6)
□ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Pennsylvania

## Level 1 Adult Literacy Rates, by County



Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

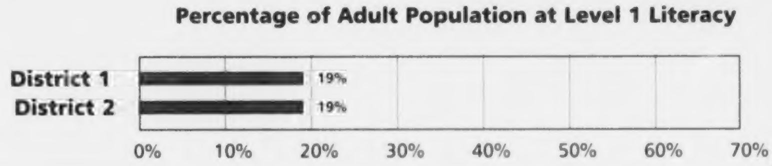
Percentage of adult population with Level 1 Literacy skills

- ■ 30% or greater (1)
- □ 20% to 30% (1)
- ■ 15% to 20% (1)
- ■ 10% to 15% (4)
- ■ 10% or less (6)
- □ no estimate available (14)

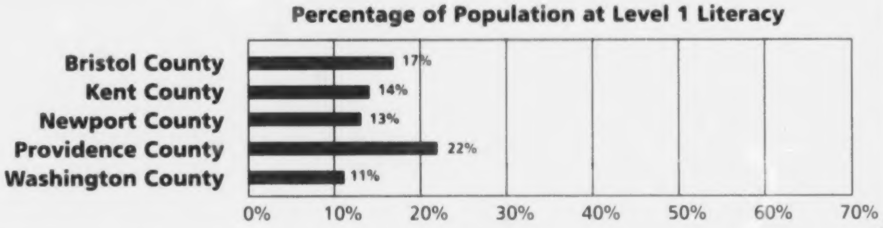
# Rhode Island

## 19% of adult population is at Level 1 Literacy

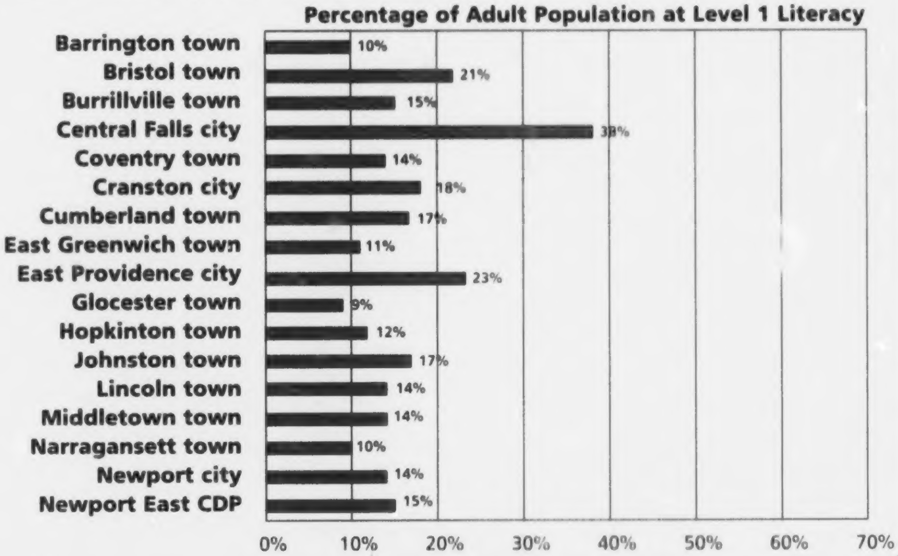
### Congressional Districts



### Counties (with adult populations of at least 5,000)



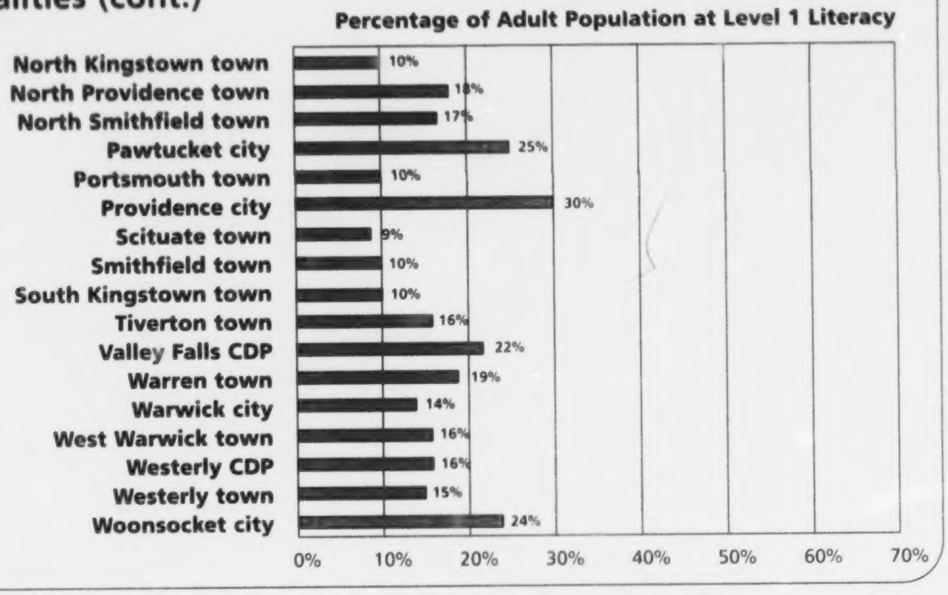
### Municipalities (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



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Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Rhode Island

## Level 1 Adult Literacy Rates, by Congressional District

Source: U.S. Department of Education
Division of Adult Education and Literacy

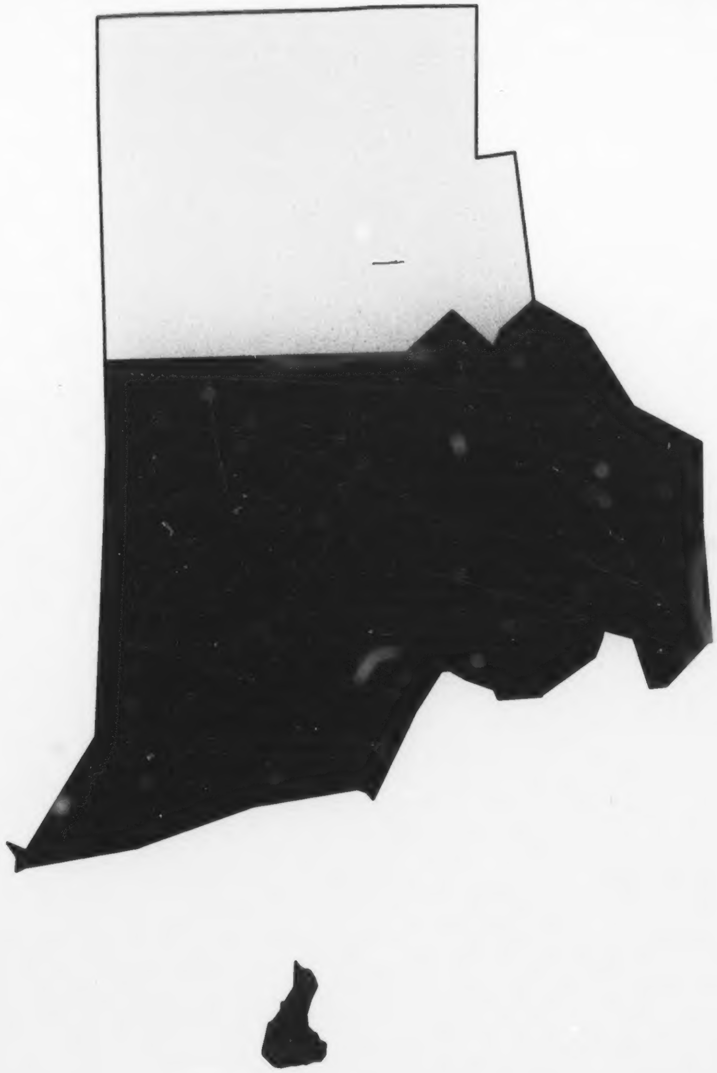
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ☐ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| ☐ | no estimate available | (14) |

# The State of Literacy in America: Rhode Island

## Level 1 Adult Literacy Rates, by County

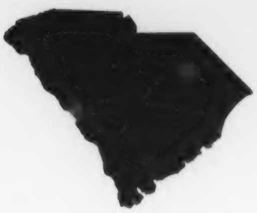


Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

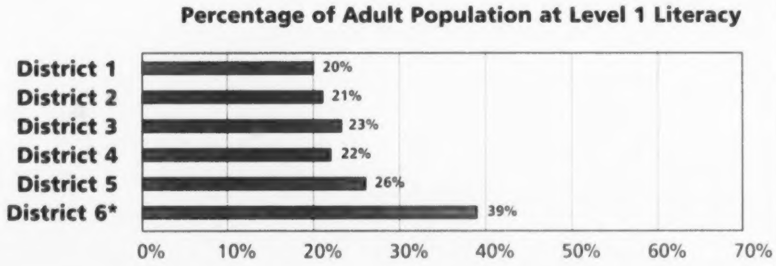
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).



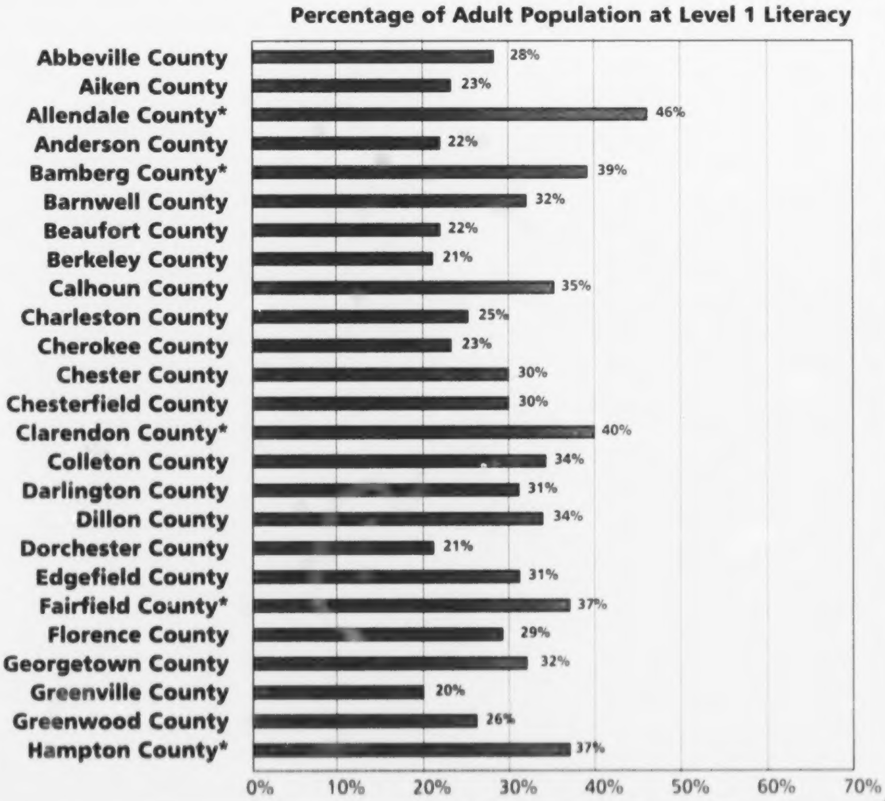
# South Carolina

## 25% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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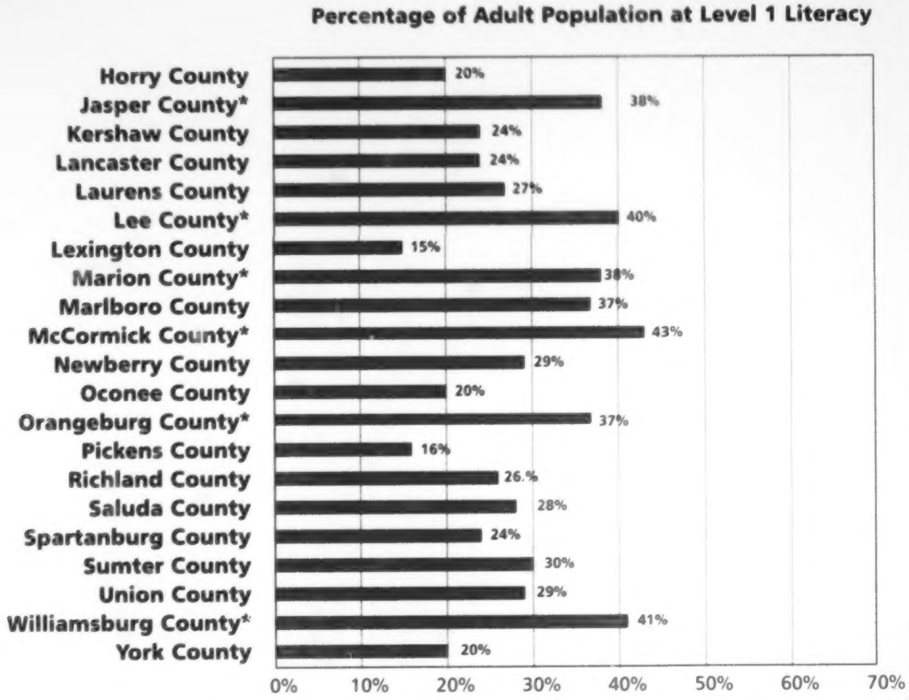
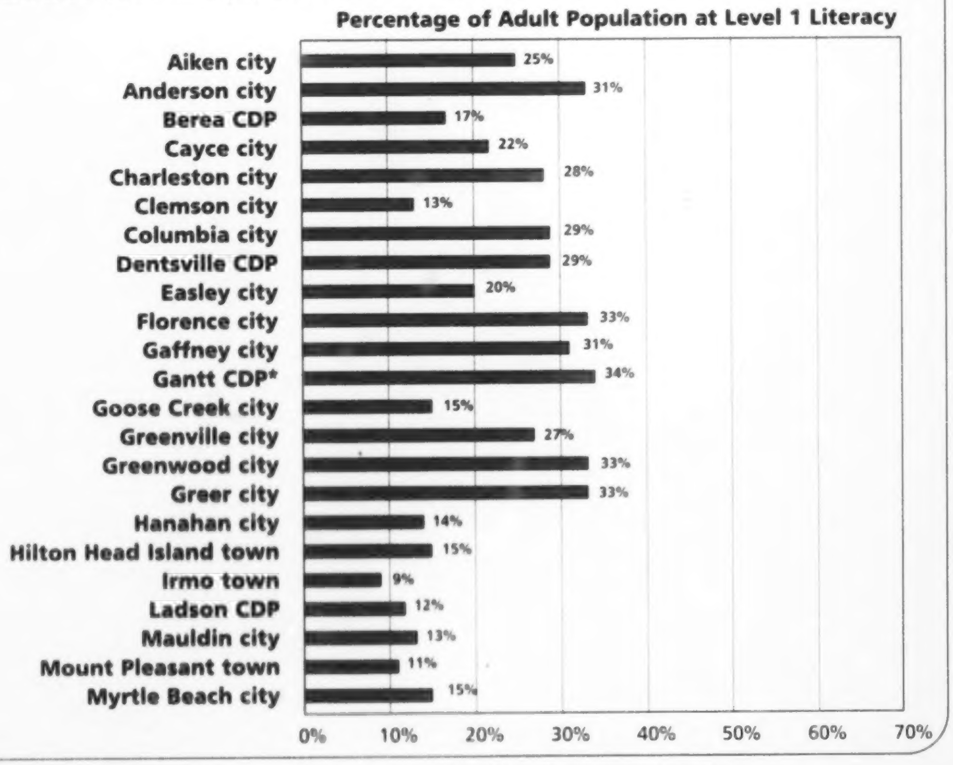
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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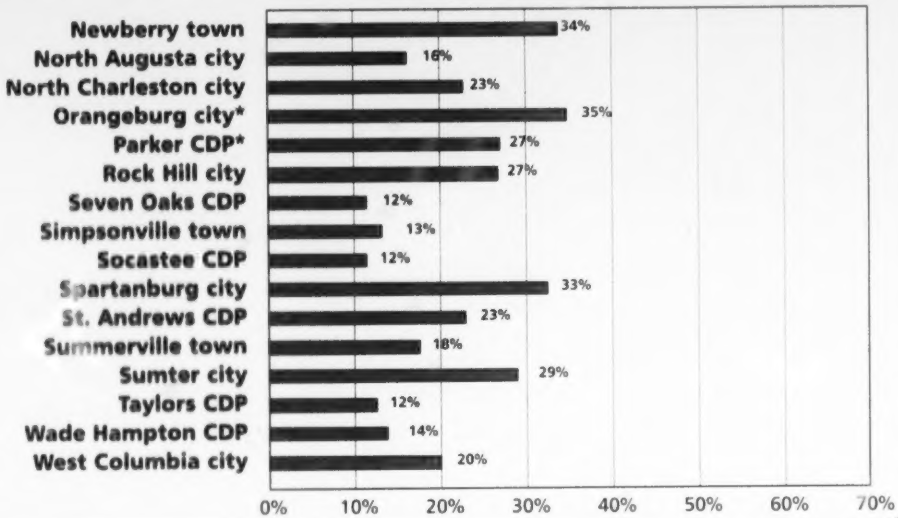
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



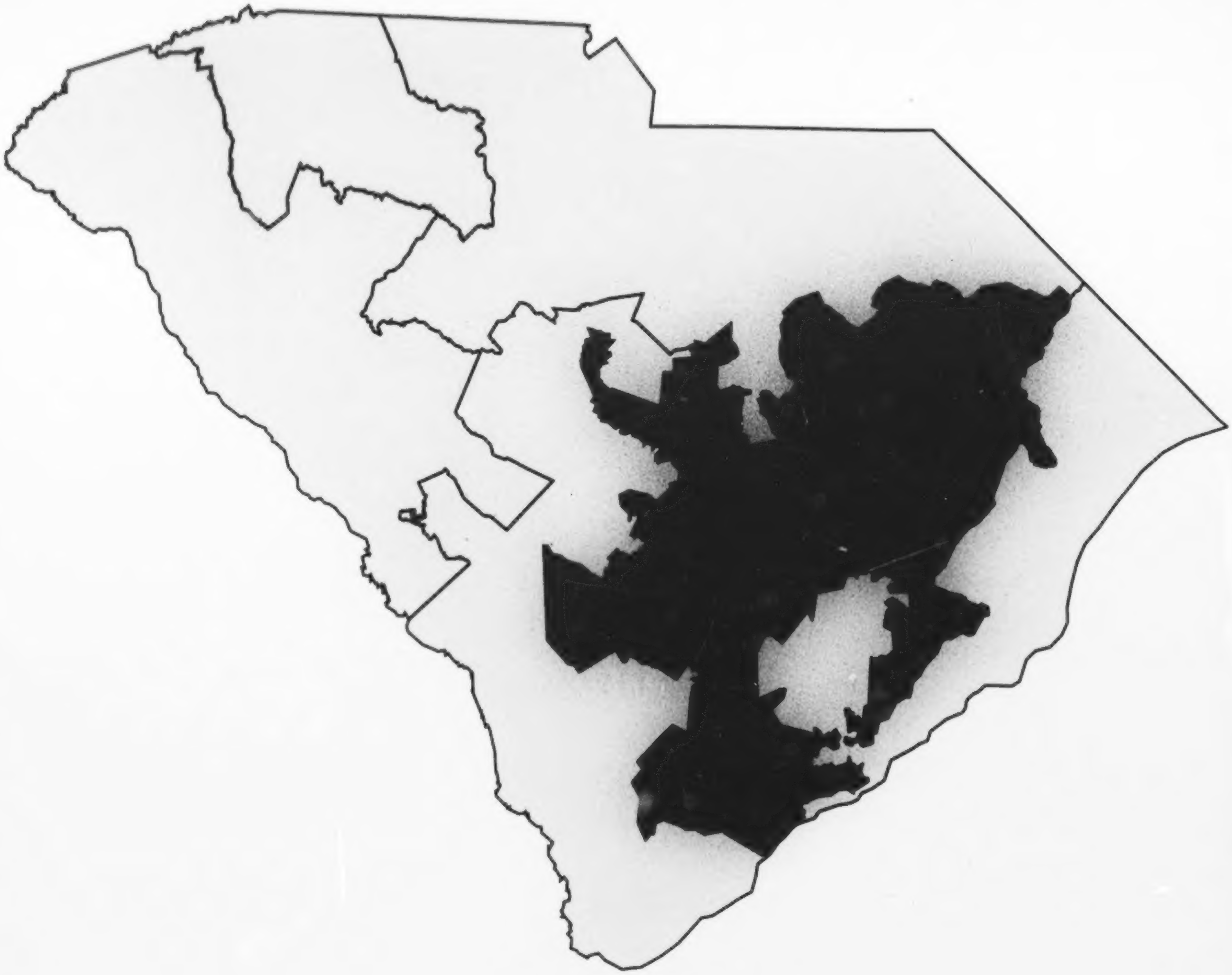
Percentage of Adult Population at Level 1 Literacy

* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: South Carolina

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

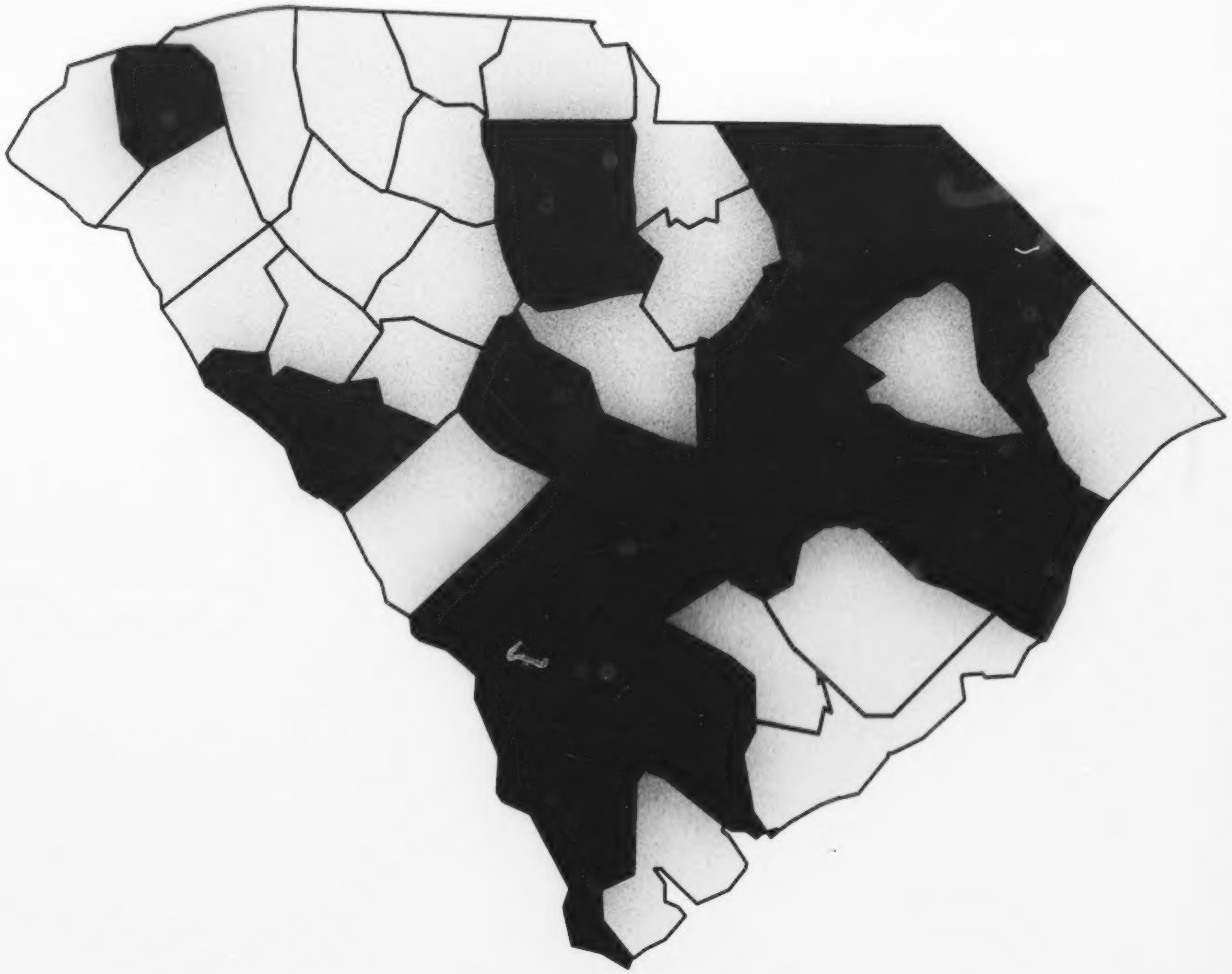
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: South Carolina

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

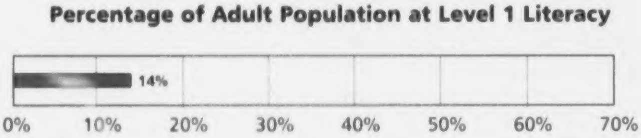
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

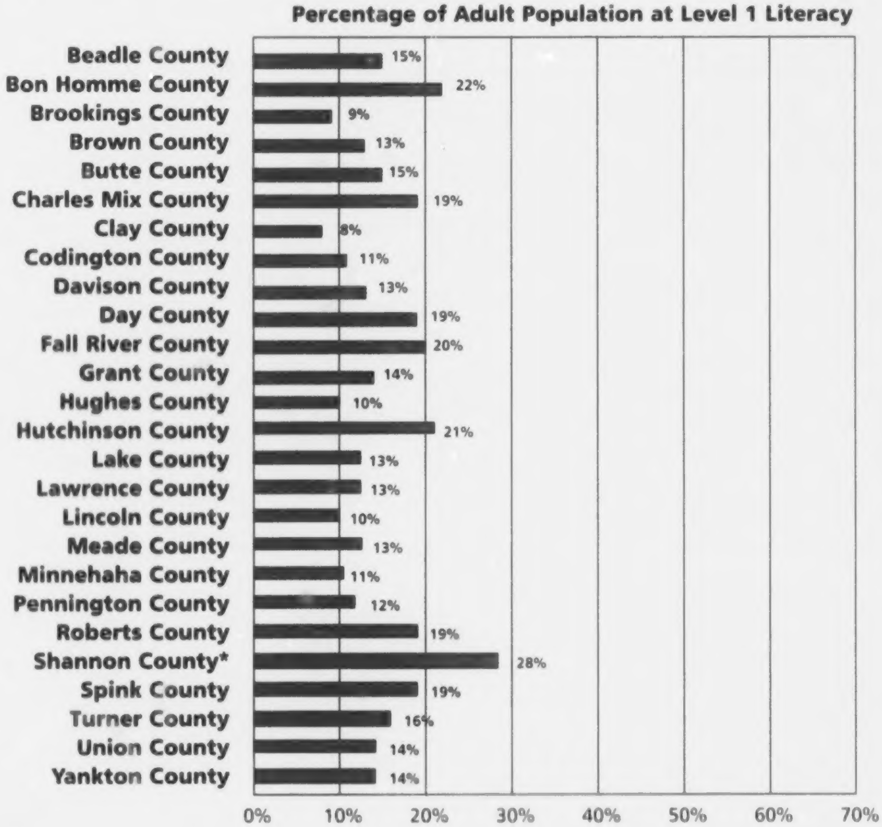
# South Dakota

## 14% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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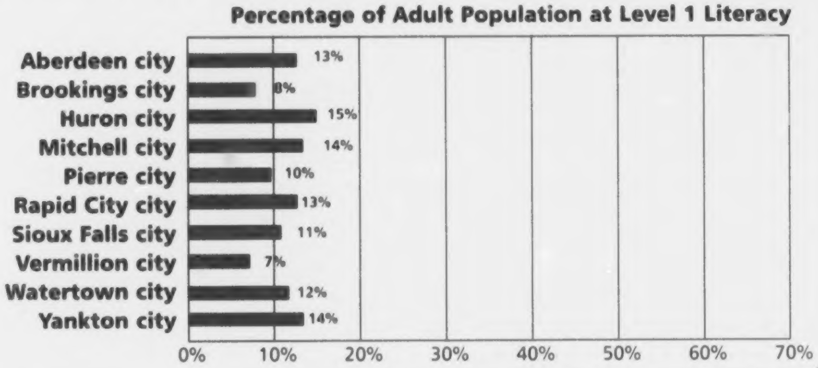
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov)

## Municipalities (with adult populations of at least 5,000)


Percentage of Adult Population at Level 1 Literacy

* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: South Dakota

## Level 1 Adult Literacy Rates, by Congressional District

Source: U.S. Department of Education
Division of Adult Education and Literacy

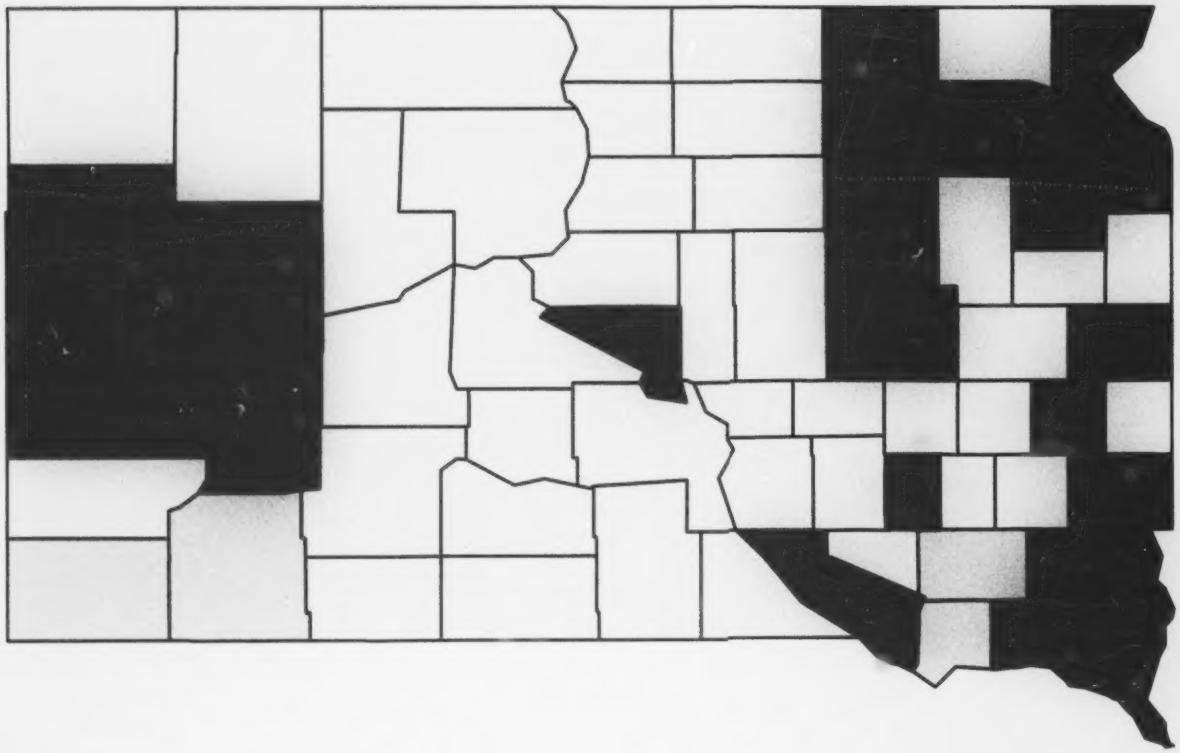
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ▨ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

# The State of Literacy in America: South Dakota

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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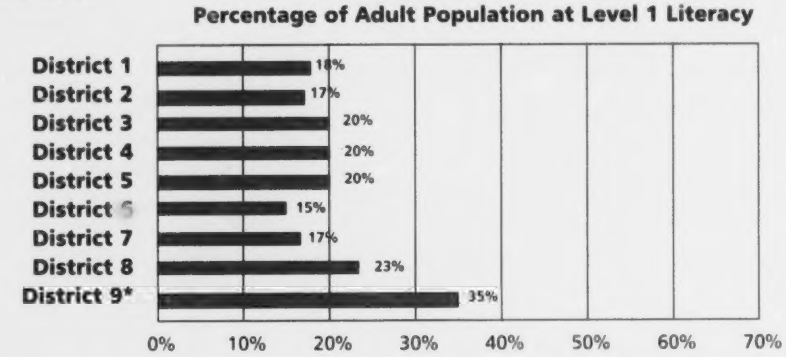
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

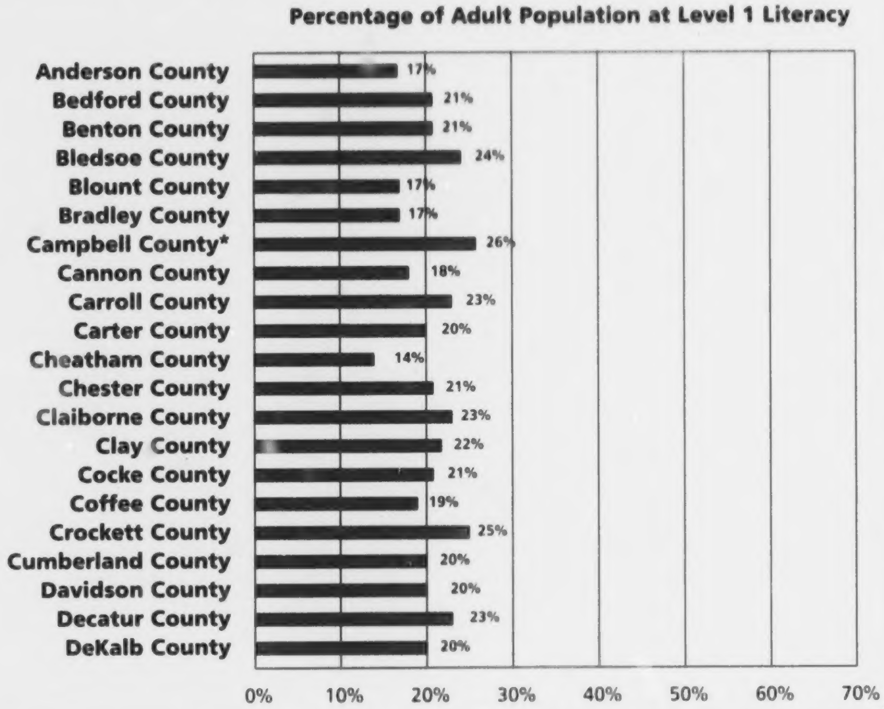
# Tennessee

## 21% of adult population is at Level 1 Literacy

### Congressional Districts



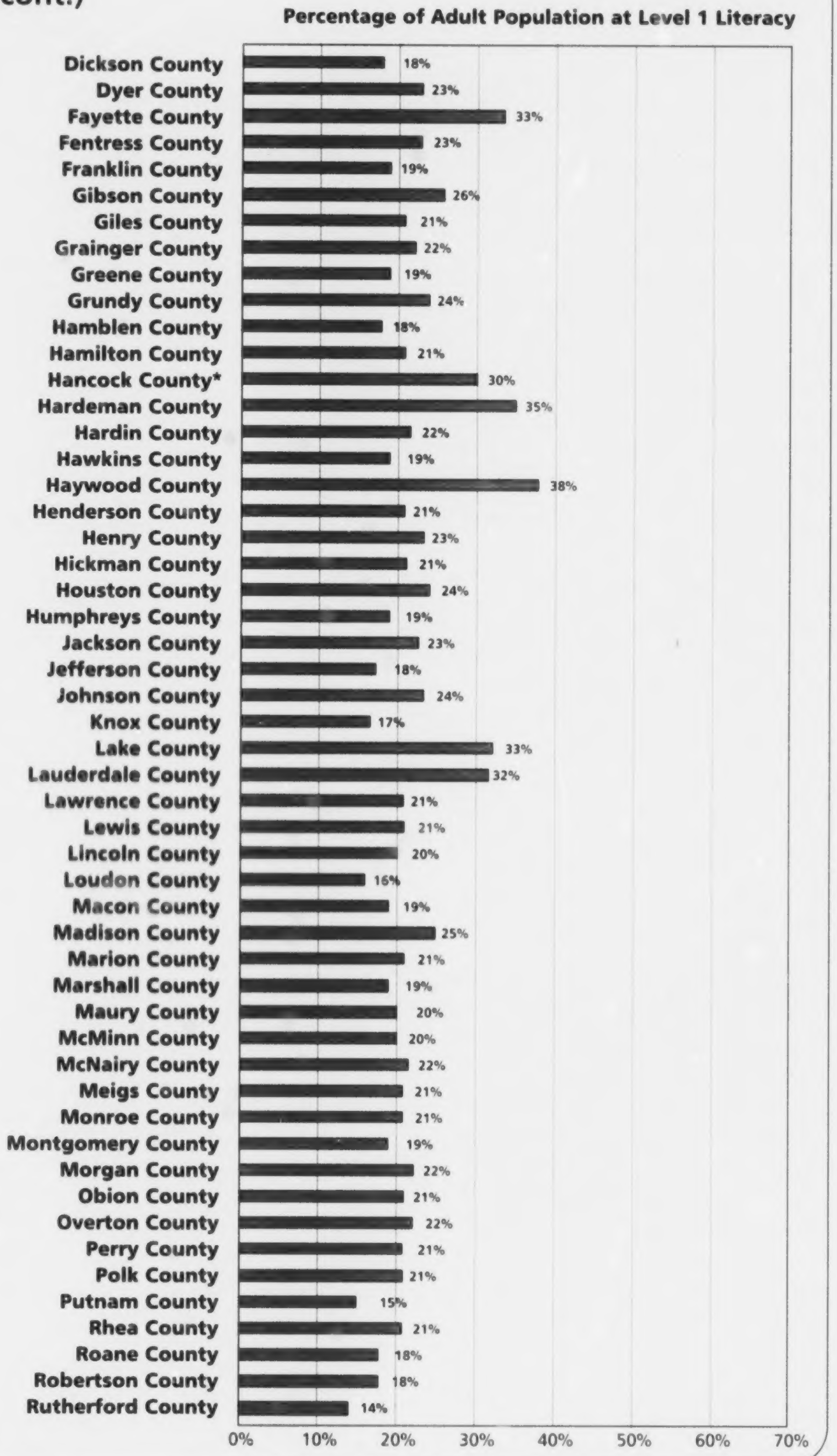
### Counties (with adult populations of at least (5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



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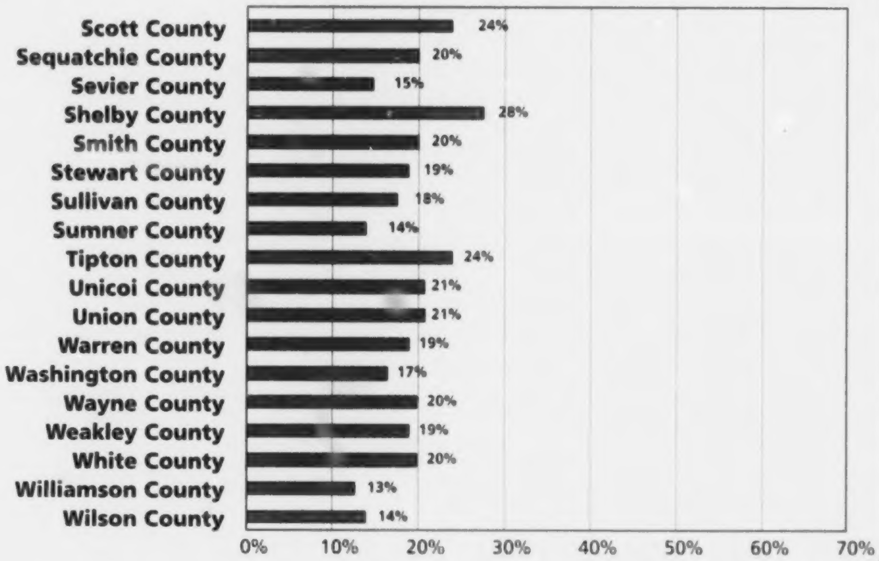
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov)

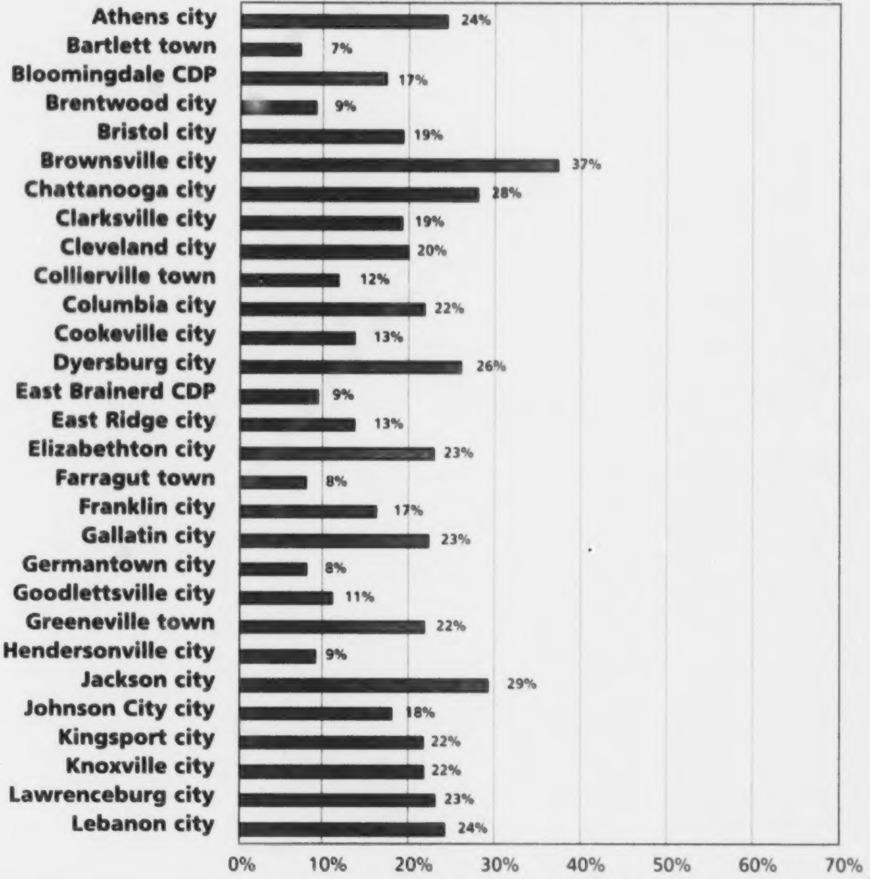
## Counties (cont.)

Percentage of Adult Population at Level 1 Literacy



## Municipalities (with adult populations of at least (5,000)

Percentage of Adult Population at Level 1 Literacy



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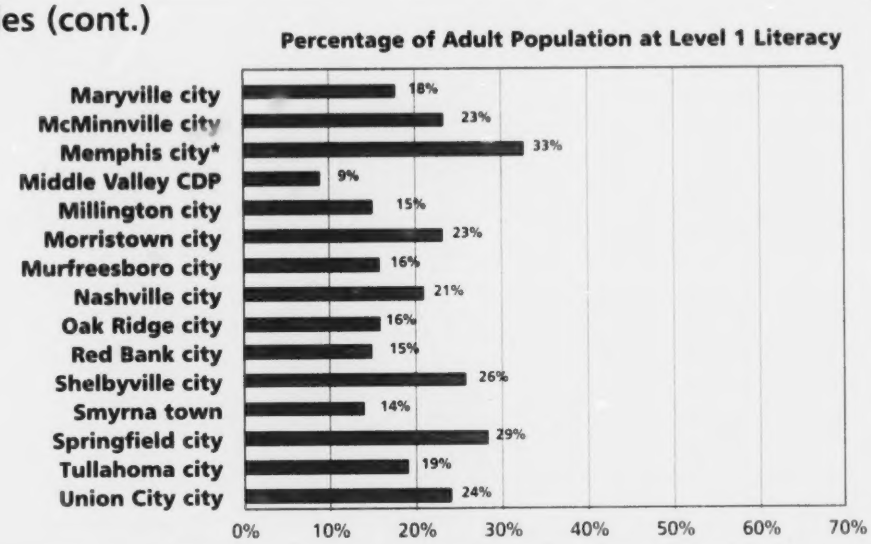
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



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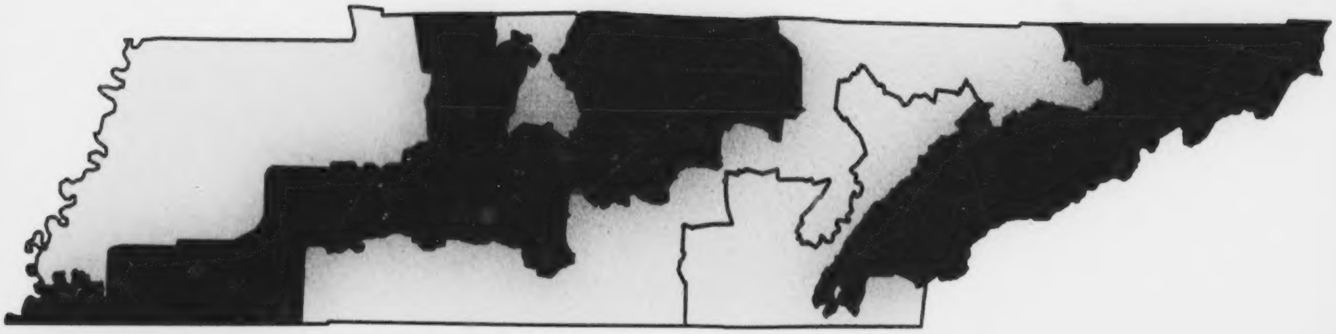
# The State of Literacy in America: Tennessee

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

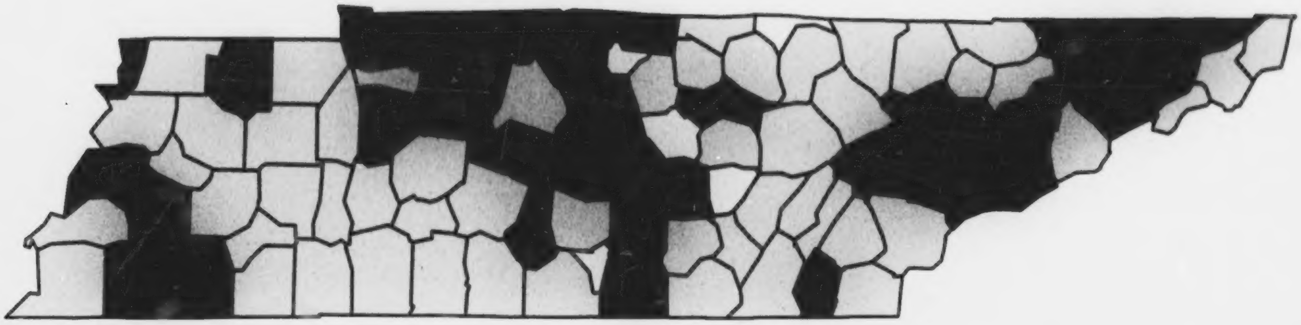
- ■ 30% or greater (1)
- □ 20% to 30% (1)
- ■ 15% to 20% (1)
- ■ 10% to 15% (4)
- ■ 10% or less (6)
- □ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Tennessee

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

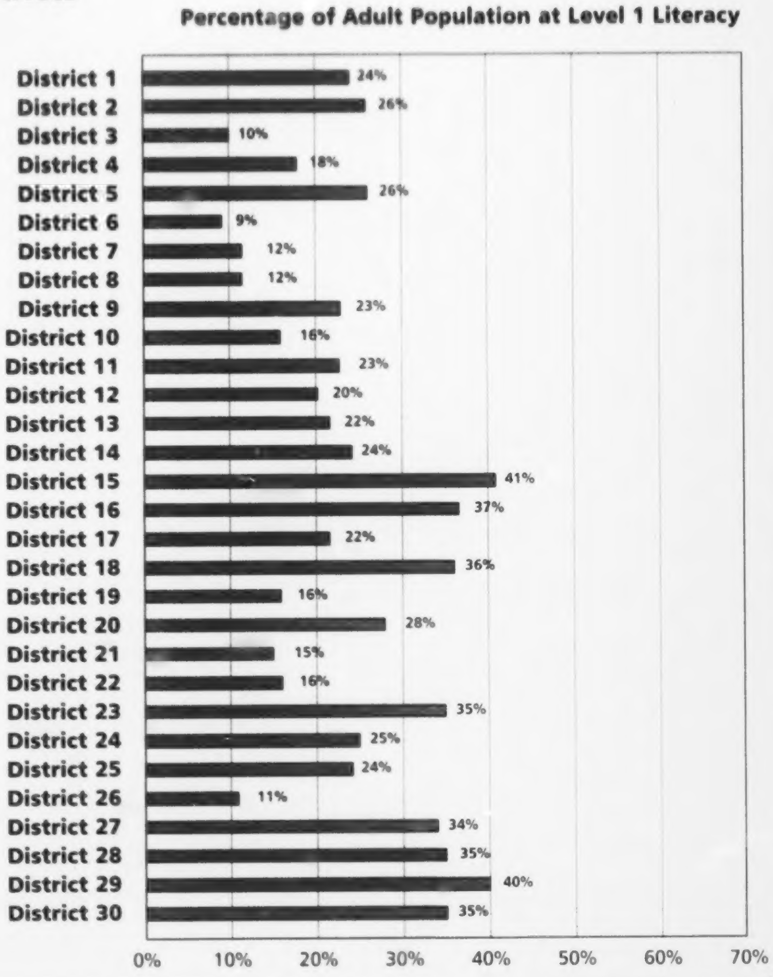
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# Texas

## 23% of adult population is at Level 1 Literacy

### Congressional Districts


Percentage of Adult Population at Level 1 Literacy

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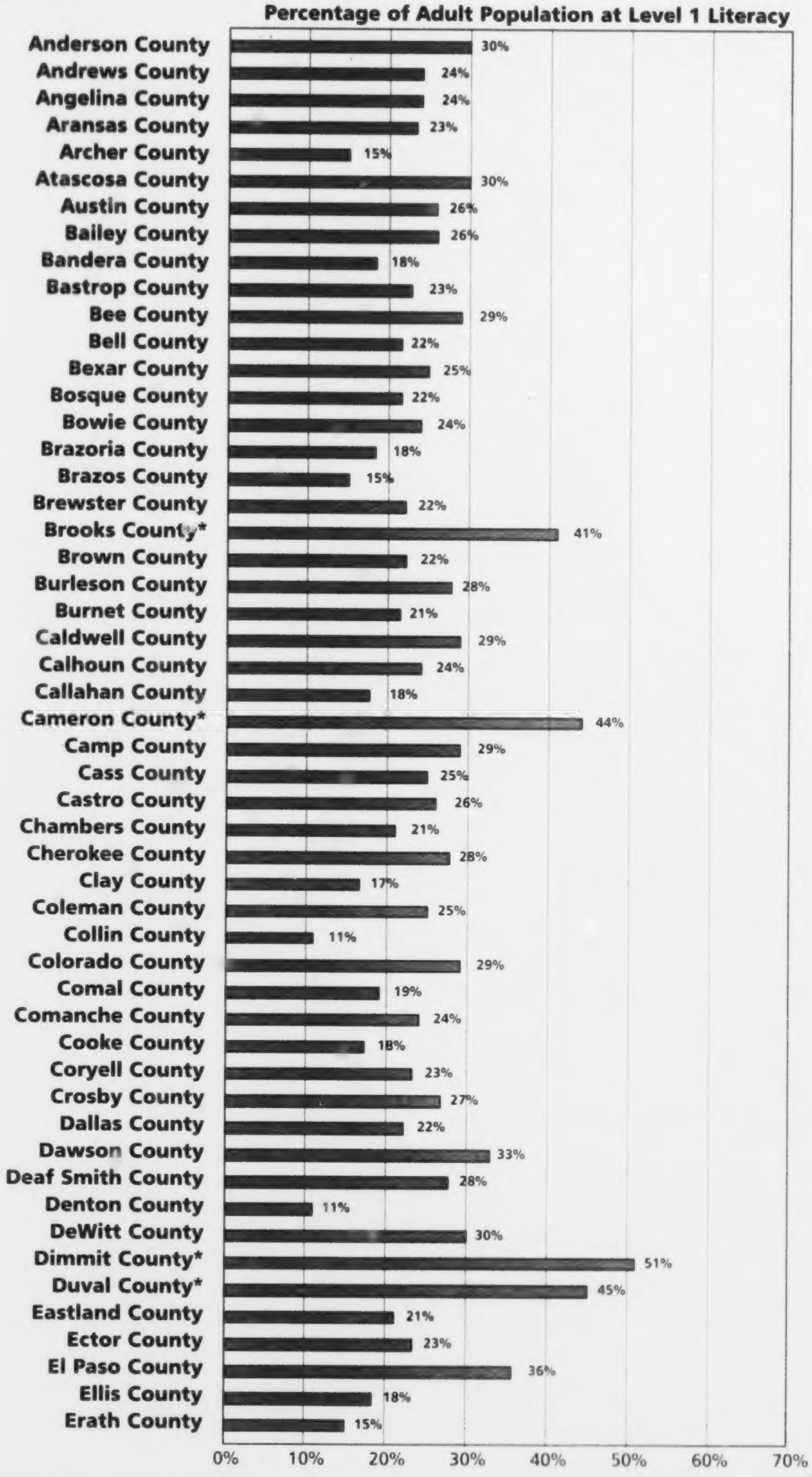
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (with adult populations of at least 5,000)



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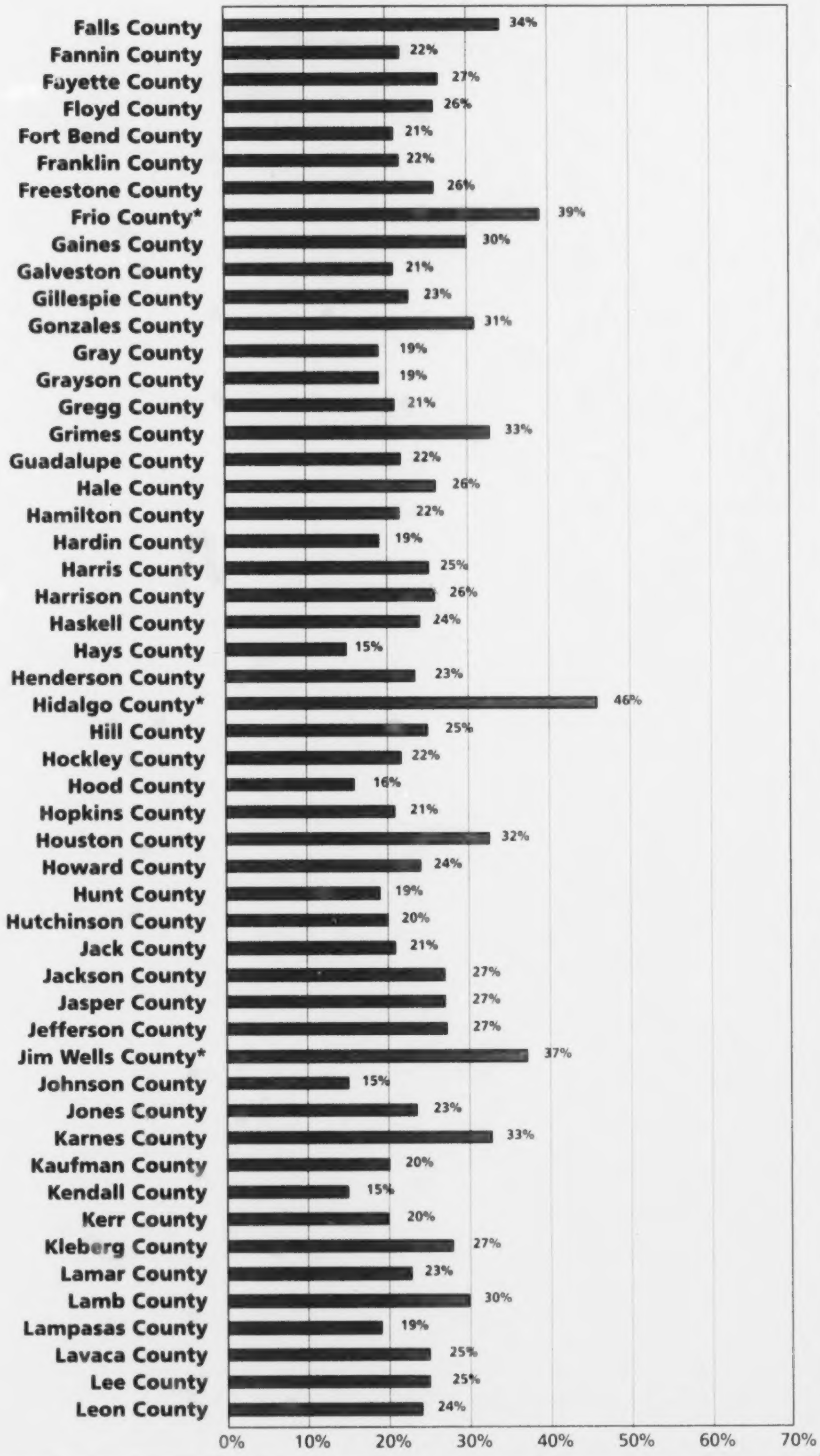
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)

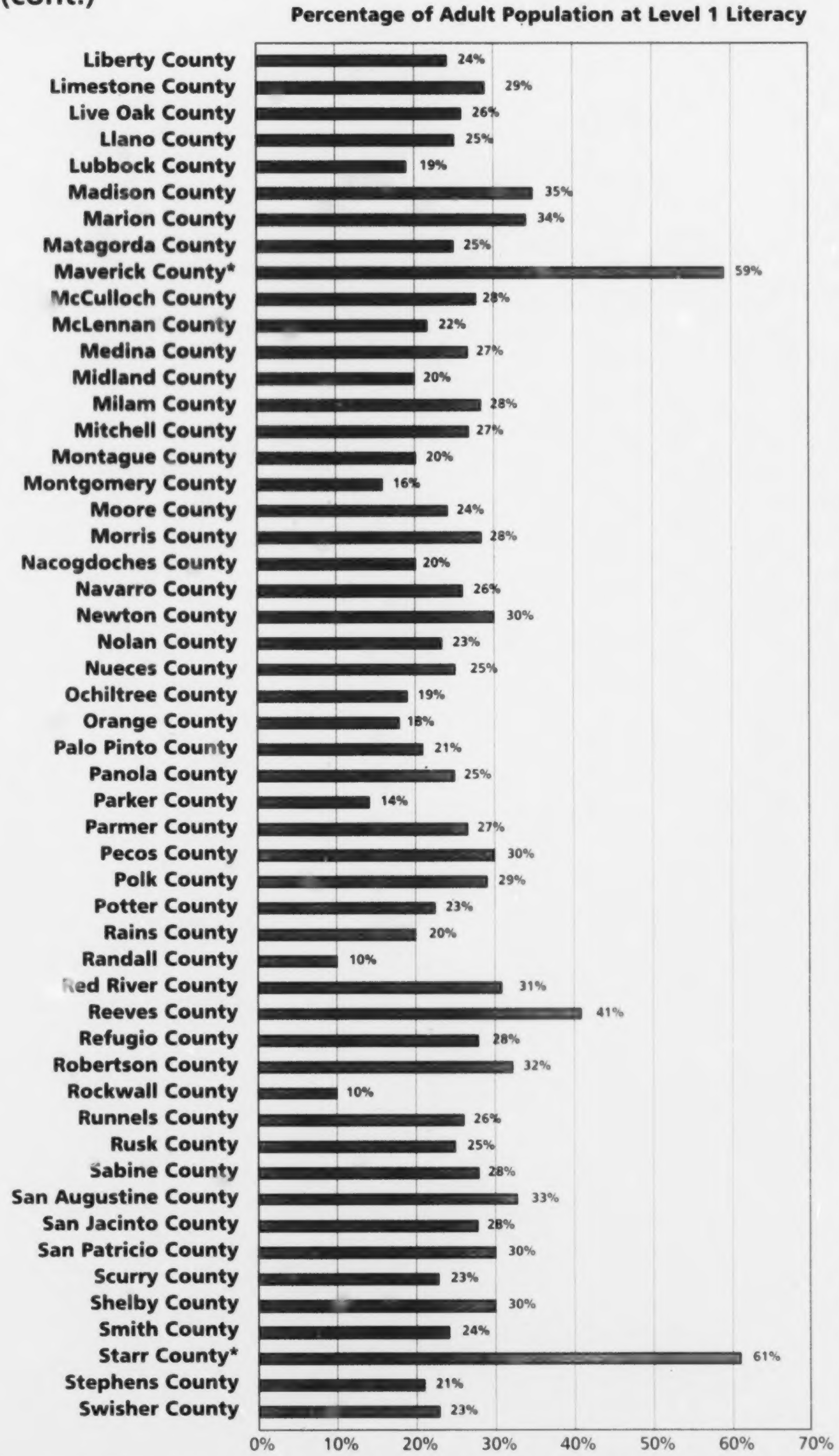


Percentage of Adult Population at Level 1 Literacy

* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



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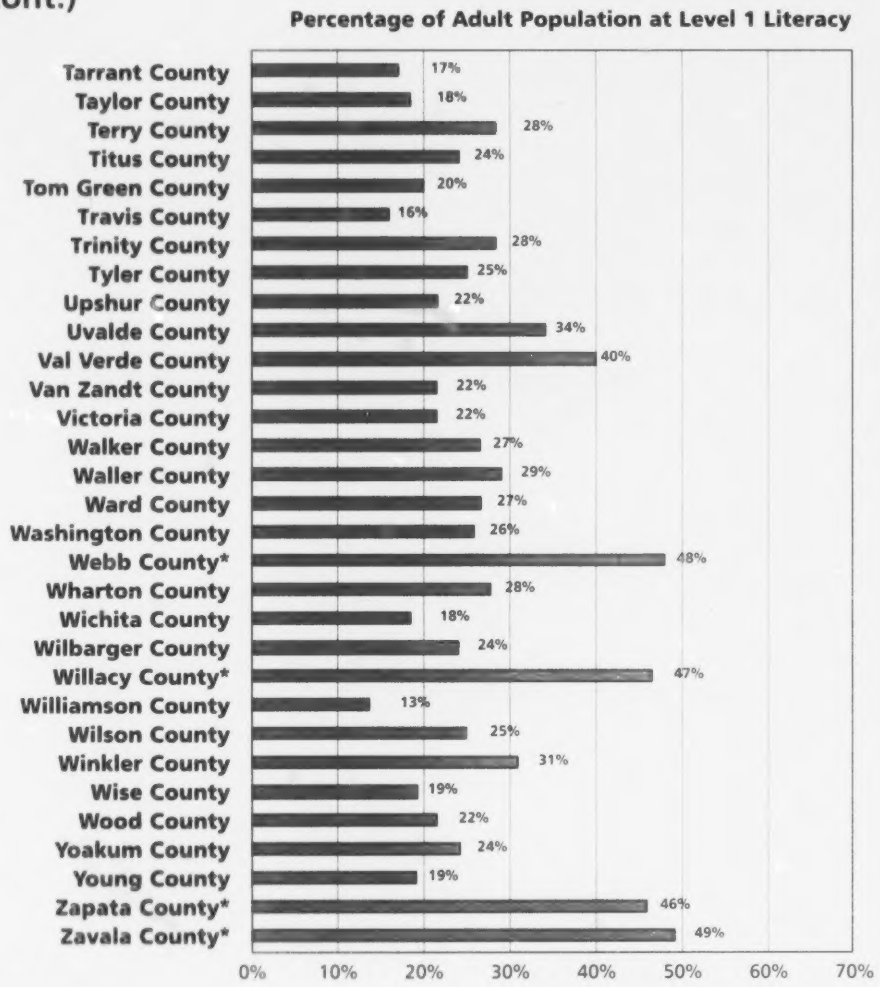
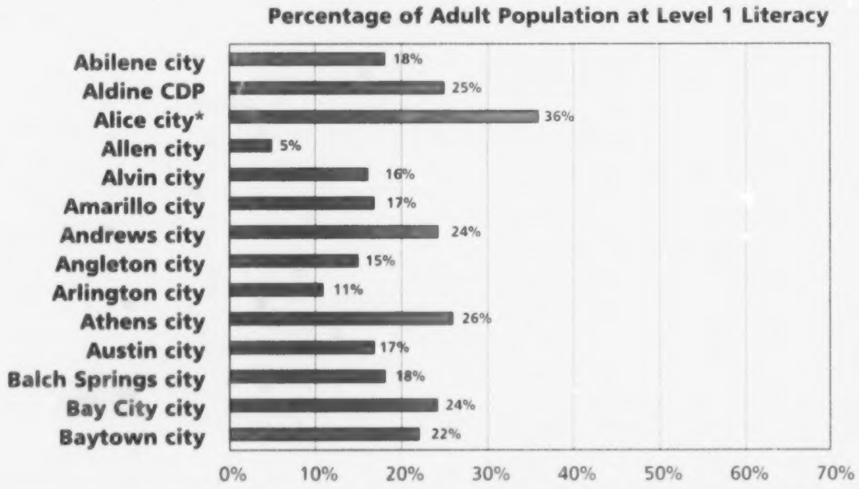
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



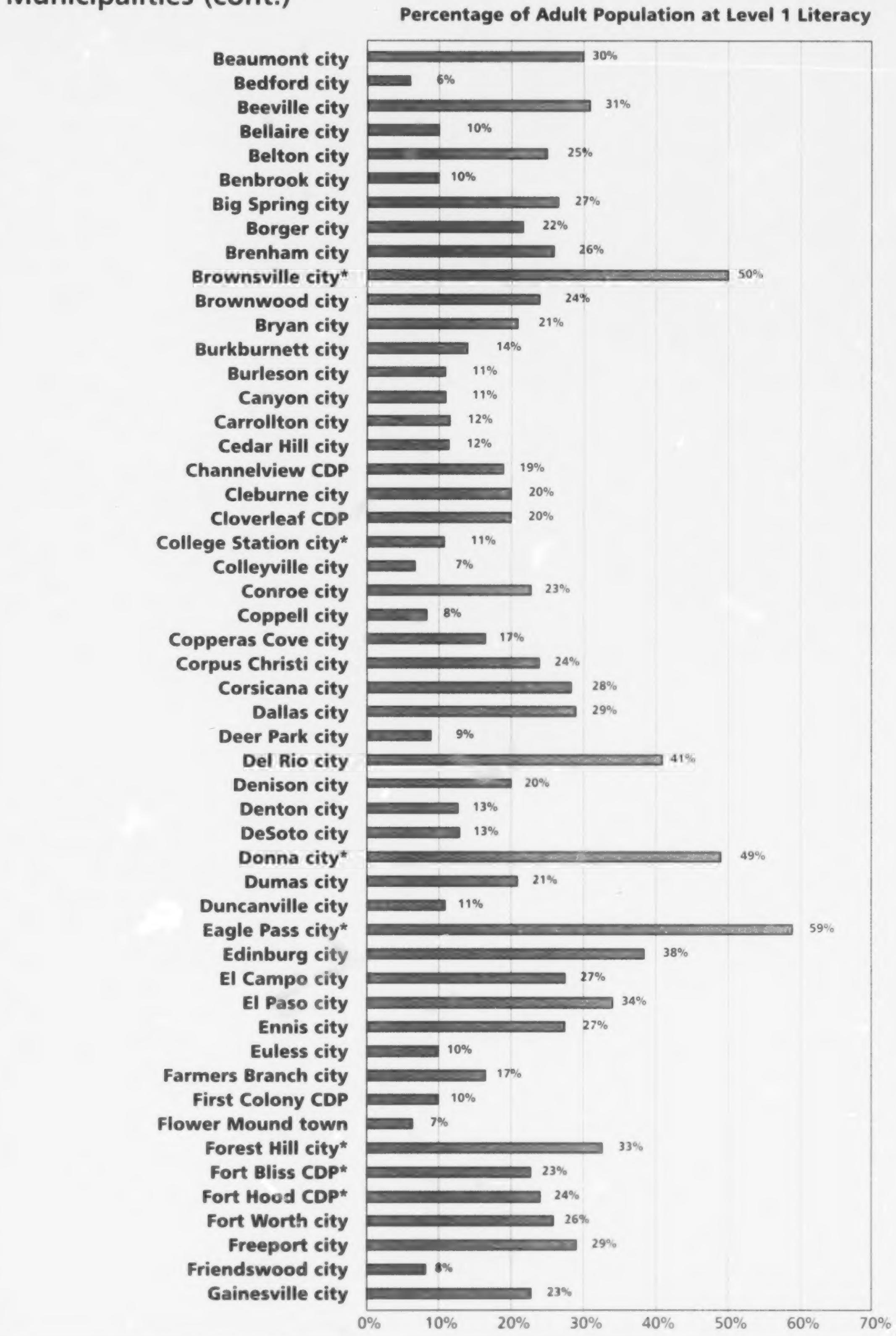
## Municipalities (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

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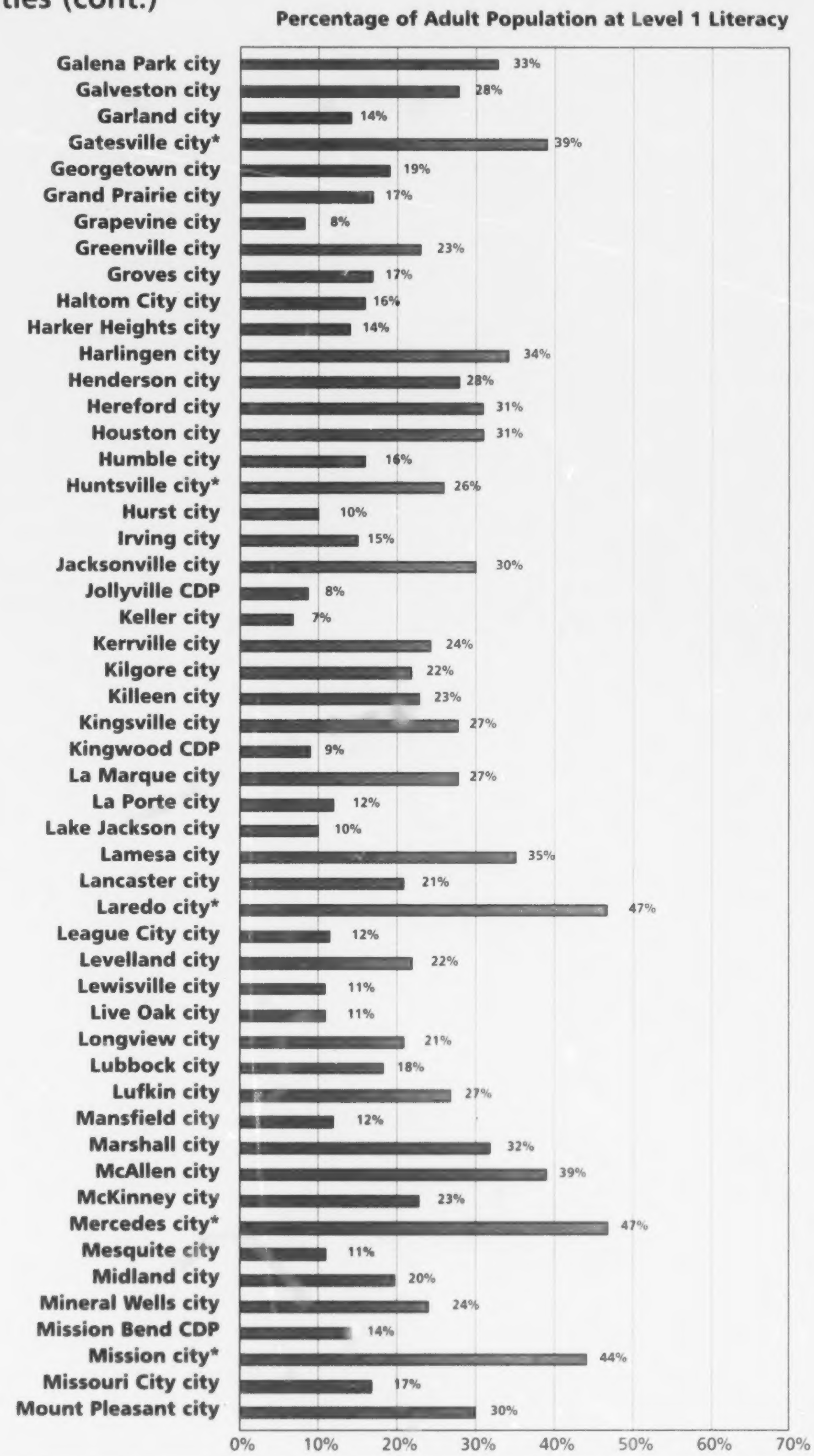
## Municipalities (cont.)



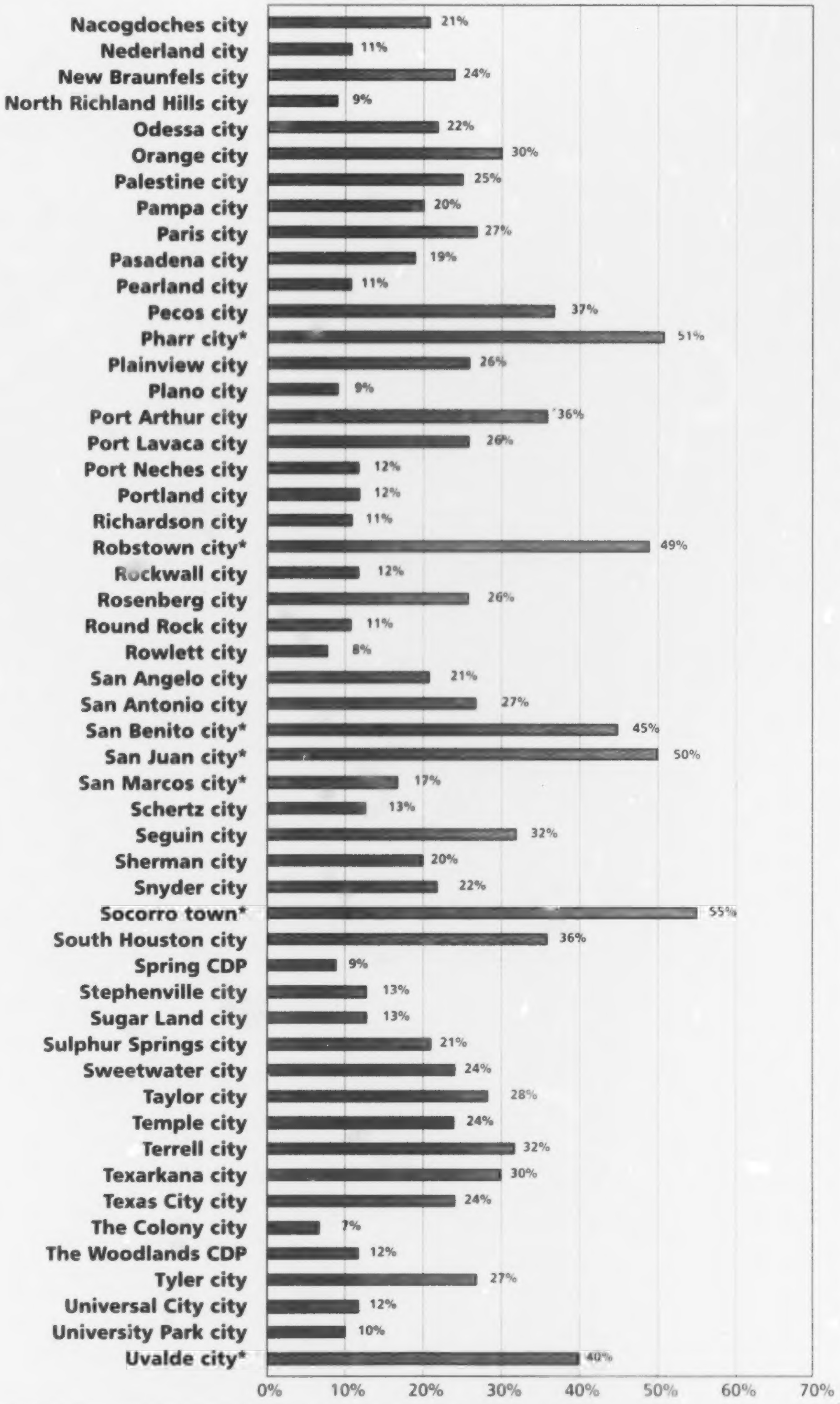
Percentage of Adult Population at Level 1 Literacy

* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)

**Percentage of Adult Population at Level 1 Literacy**



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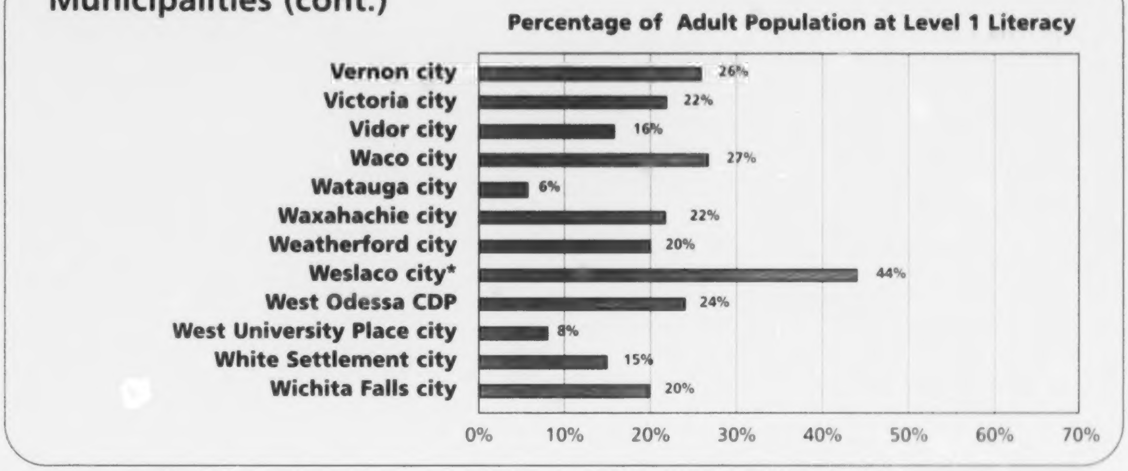
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)



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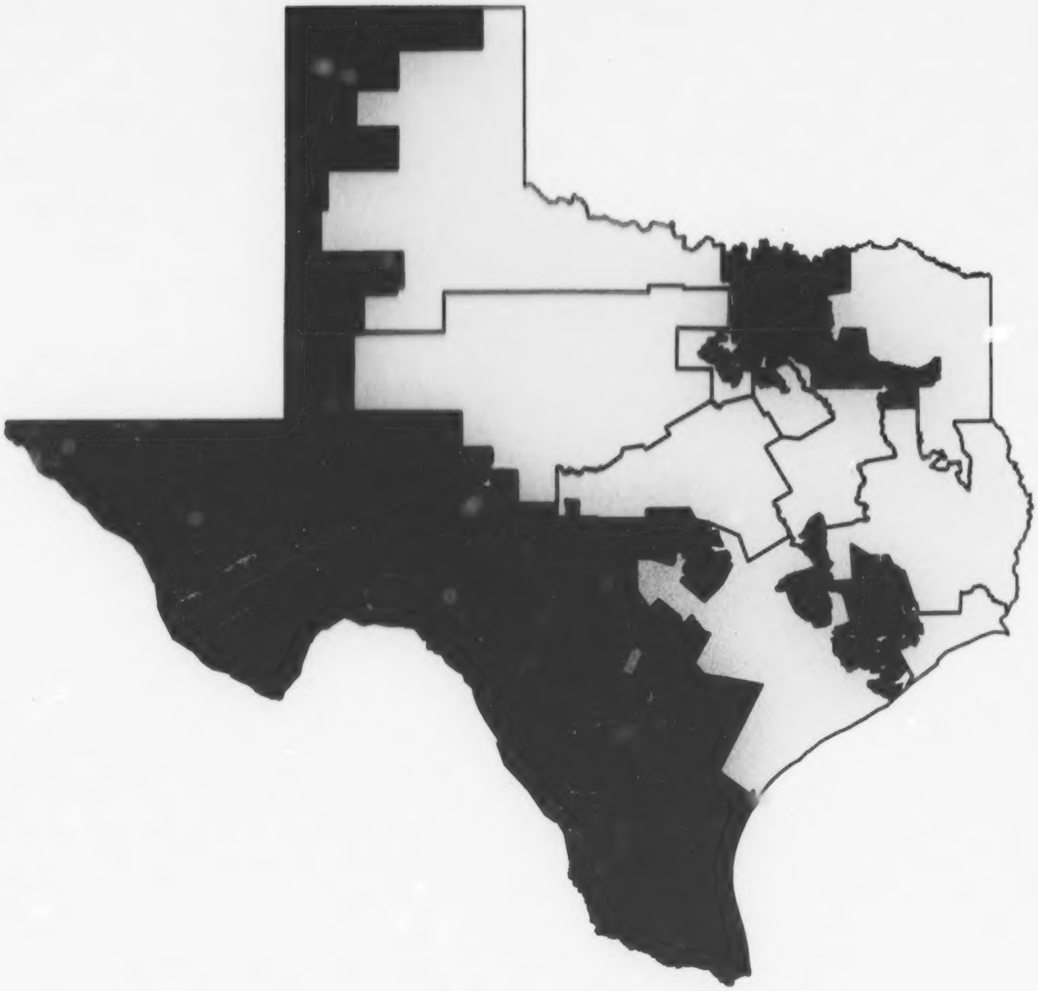
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov)

# The State of Literacy in America: Texas

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

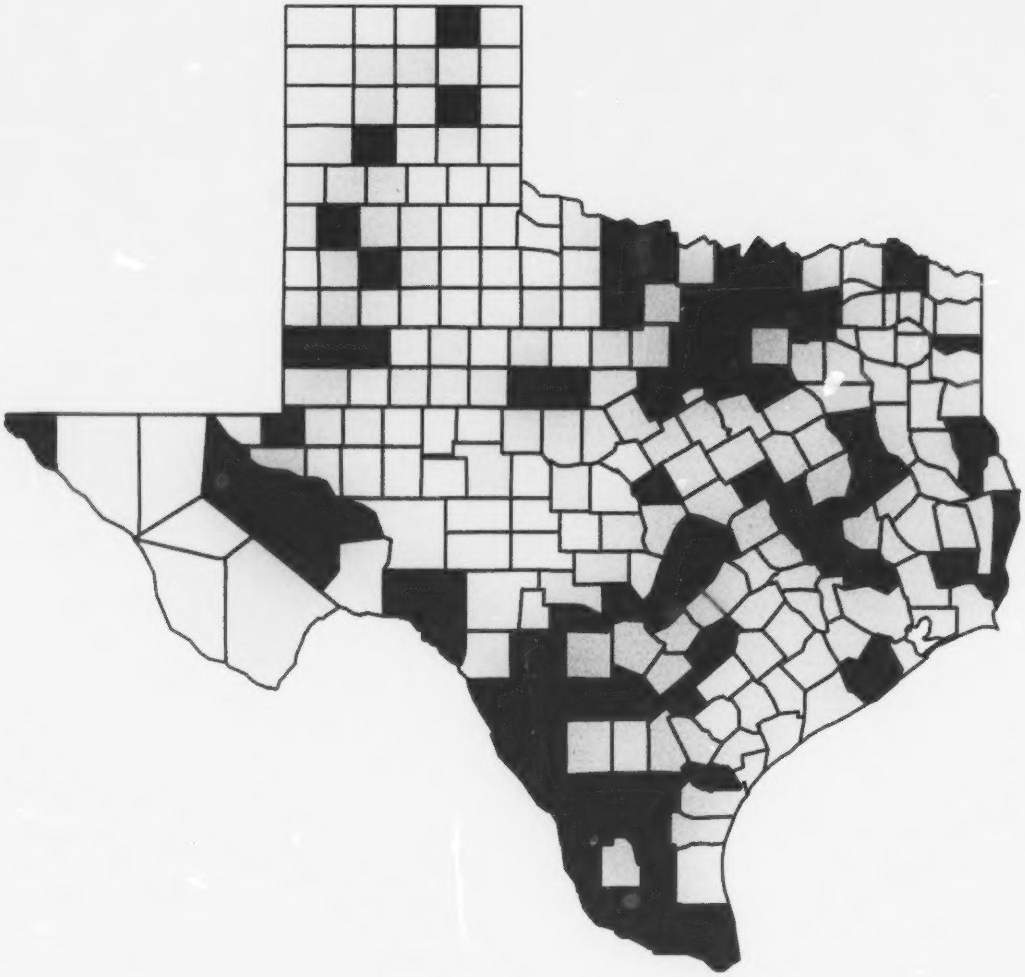
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ☐ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| ☐ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Texas

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

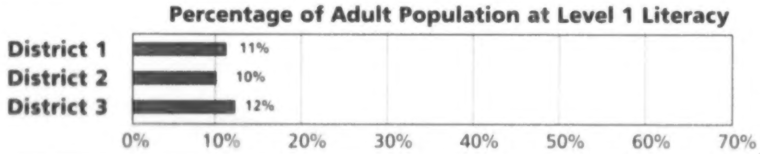
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

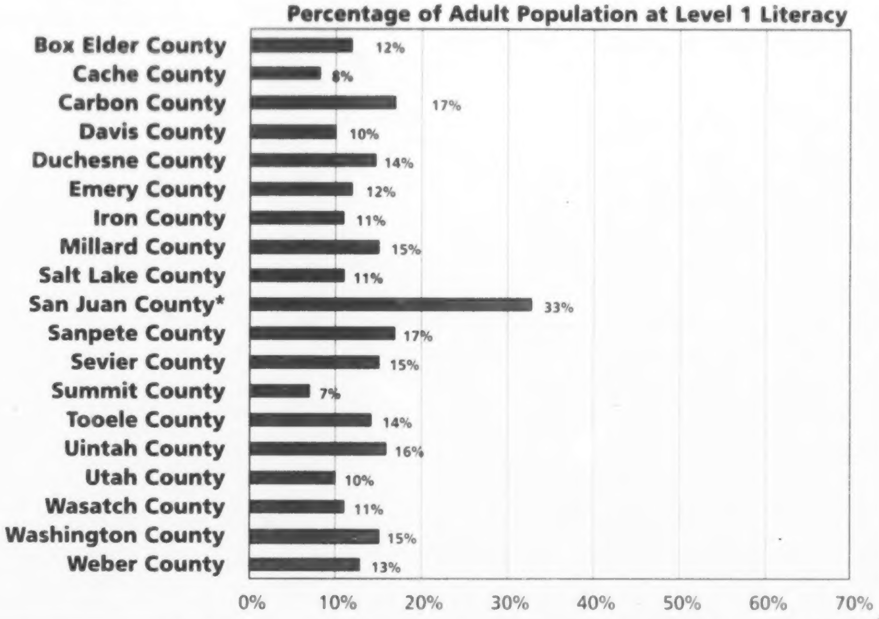
# Utah

## 11% of adult population is at Level 1 Literacy

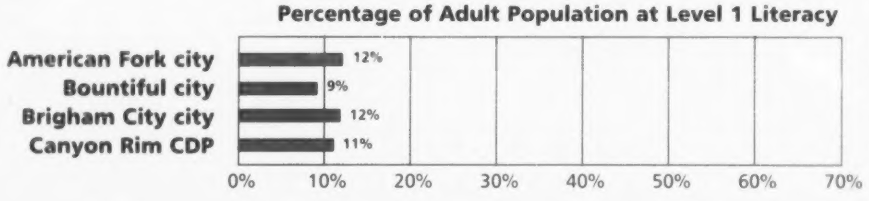
### Congressional Districts



### Counties (with adult populations of at least 5,000)



### Municipalities (with adult populations of at least 5,000)



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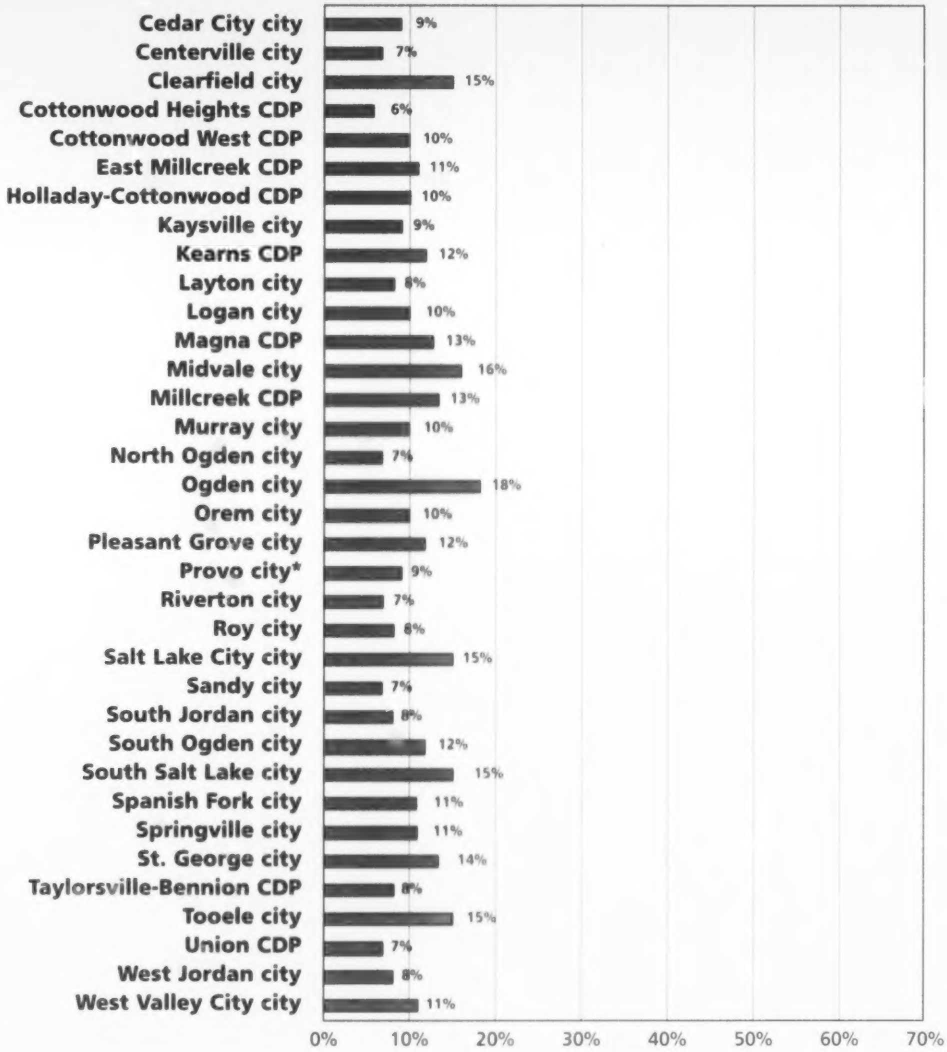
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Municipalities (cont.)

**Percentage of Adult Population at Level 1 Literacy**



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# The State of Literacy in America: Utah

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

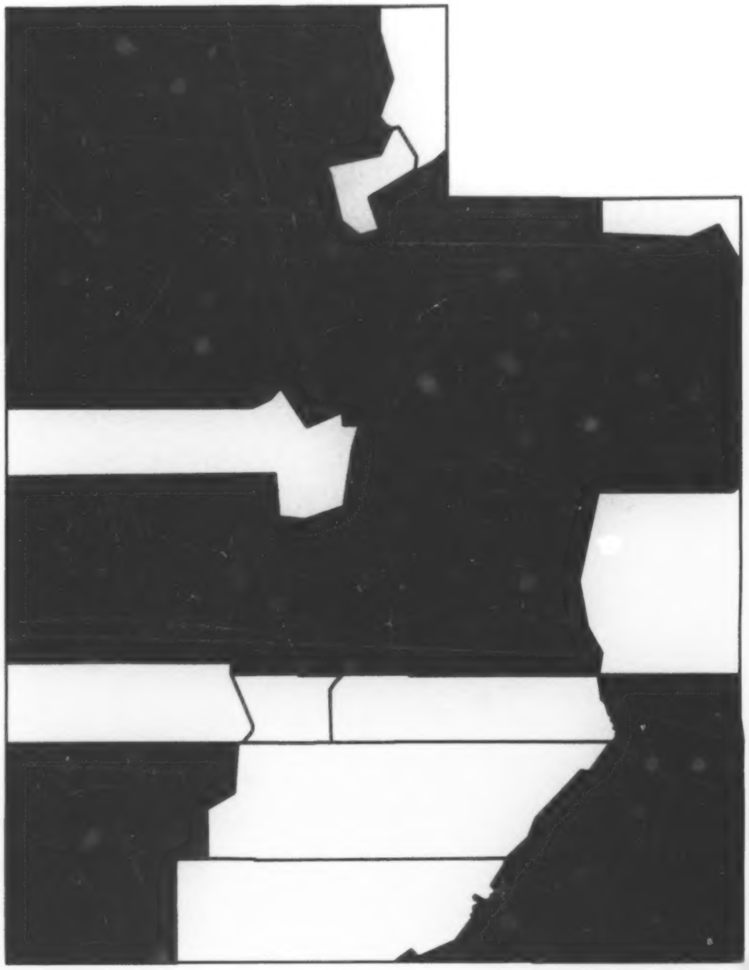
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Utah

## Level 1 Adult Literacy Rates, by County



Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

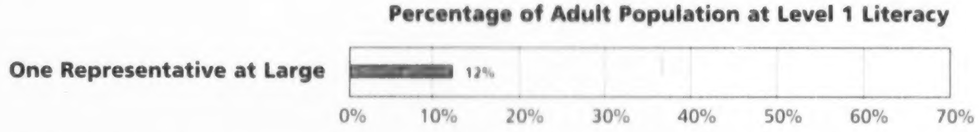
Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

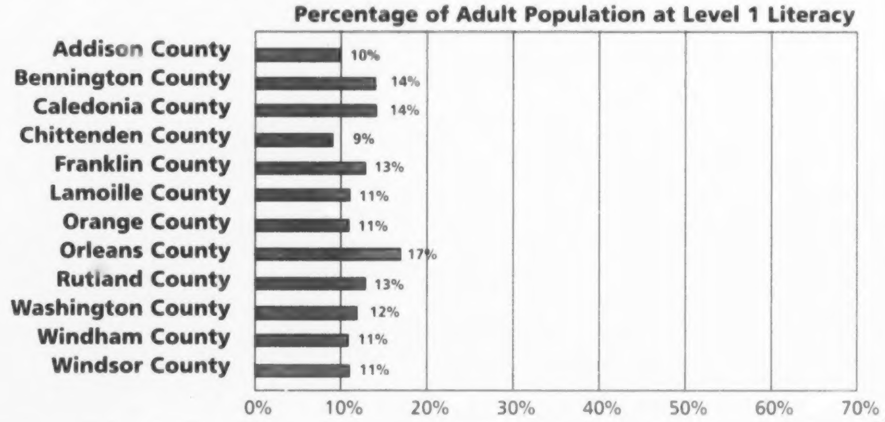
# Vermont

## 12% of adult population is at Level 1 Literacy

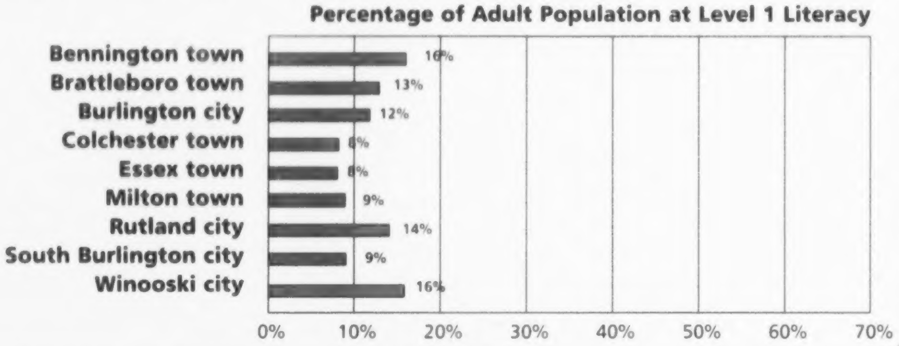
### Congressional Districts



### Counties (with adult populations of at least 5,000)



### Municipalities (with adult populations of at least 5,000)



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Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available on a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Vermont

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

- ■ 30% or greater (1)
- □ 20% to 30% (1)
- ■ 15% to 20% (1)
- ■ 10% to 15% (4)
- ■ 10% or less (6)
- □ no estimate available (14)

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Vermont

## Level 1 Adult Literacy Rates, by County

Percentage of adult population with Level 1 Literacy skills
■ 30% or greater (1)
☐ 20% to 30% (1)
■ 15% to 20% (1)
■ 10% to 15% (4)
■ 10% or less (6)
☐ no estimate available (14)

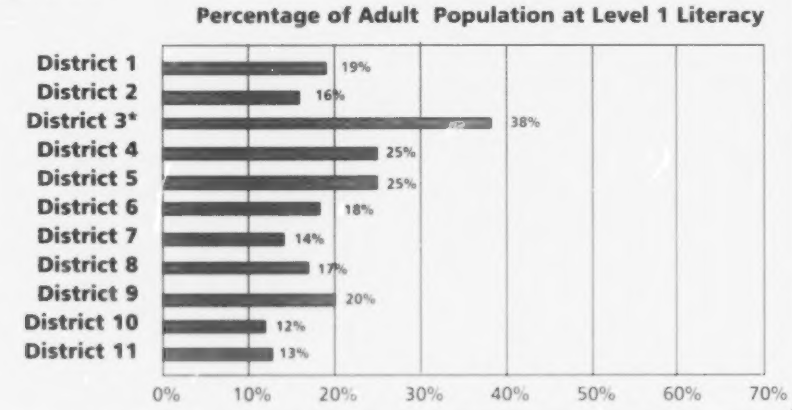
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

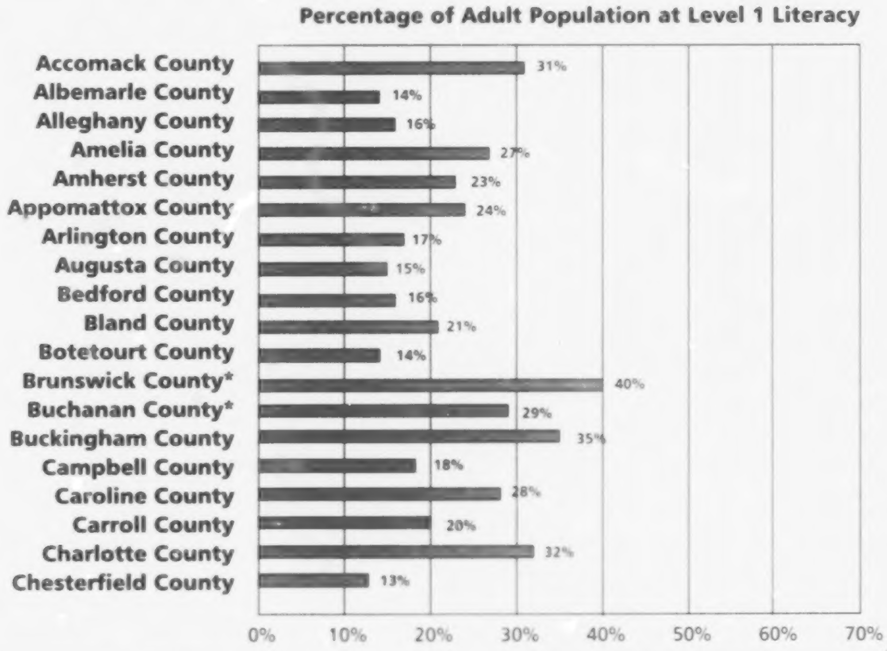
# Virginia

## 19% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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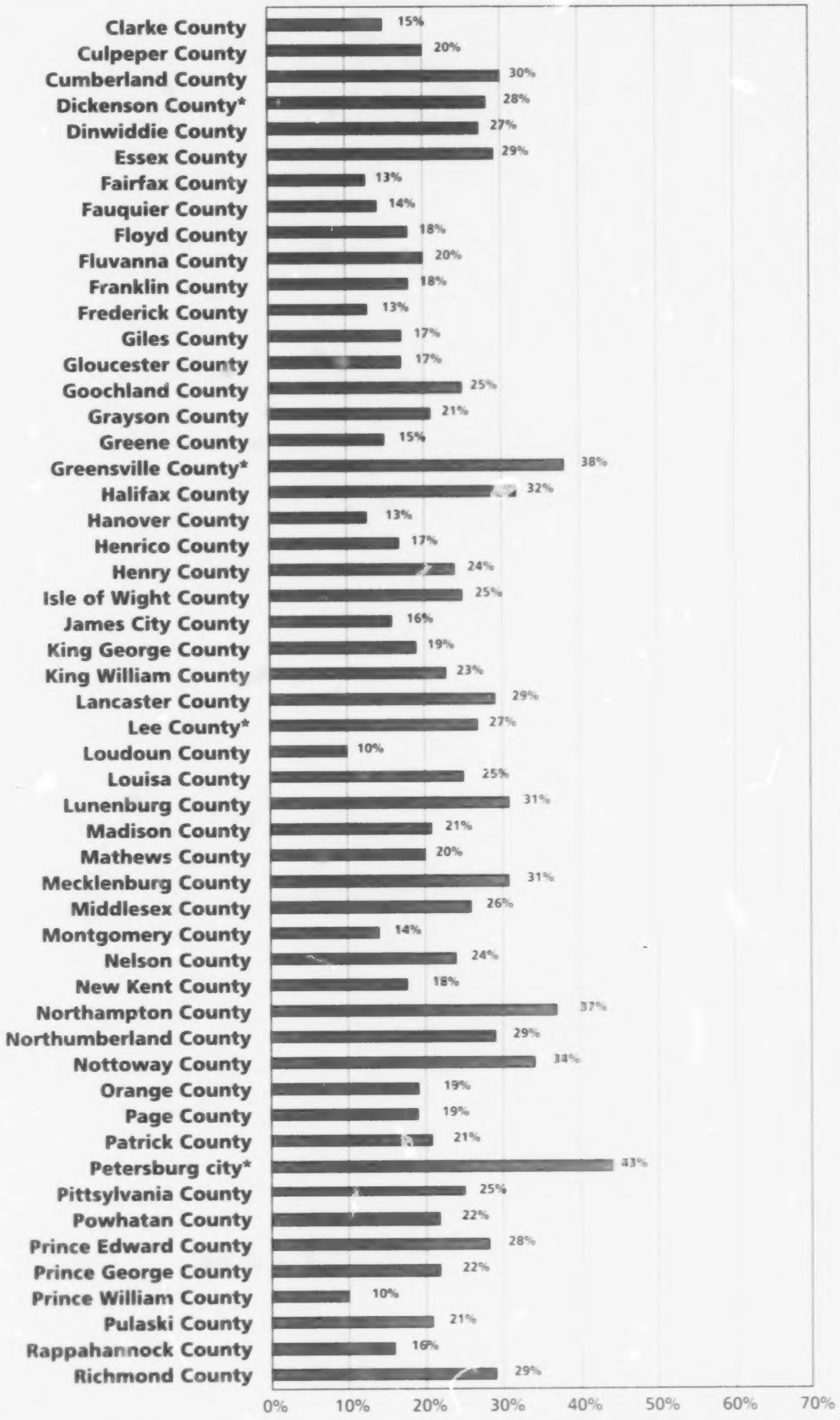
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)

Percentage of Adult Population at Level 1 Literacy



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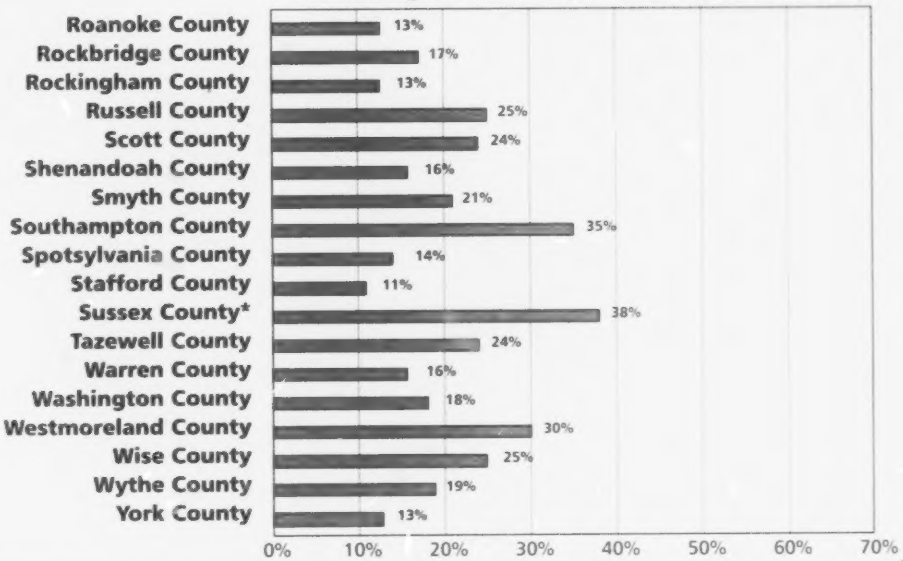
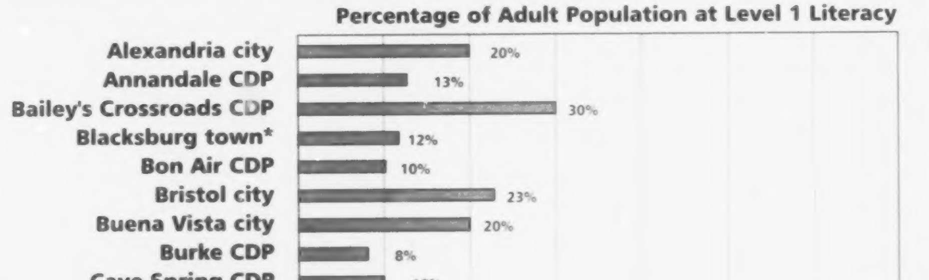
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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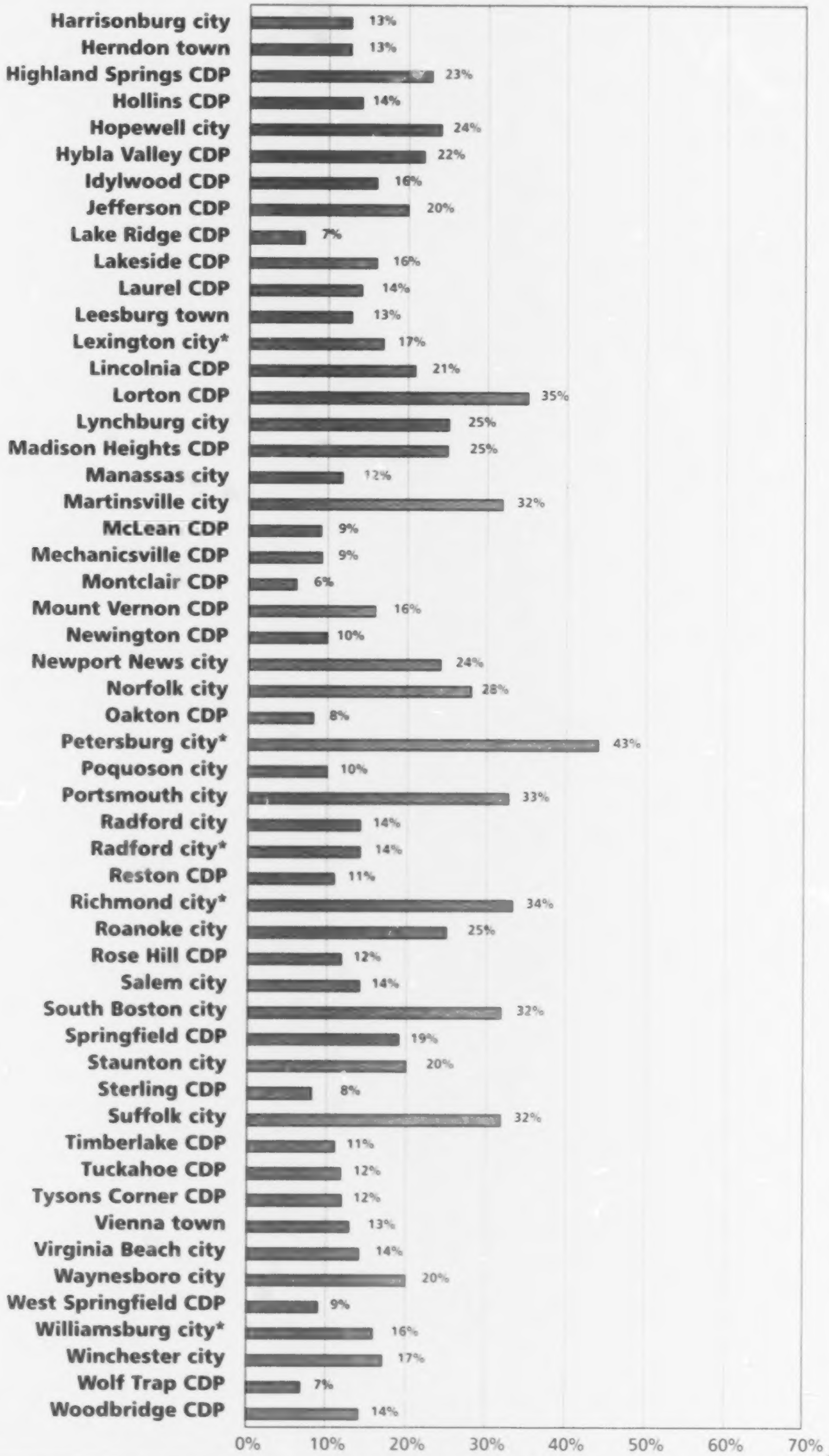
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov)

## Municipalities (cont.)



Percentage of Adult Population at Level 1 Literacy

* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Virginia

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

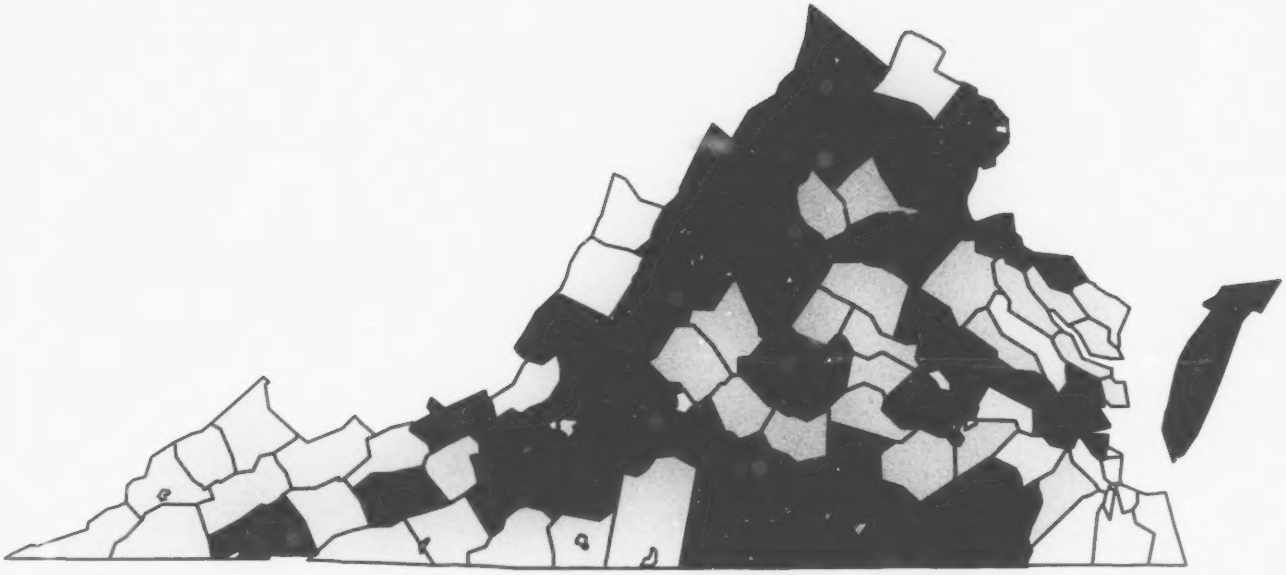
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Virginia

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

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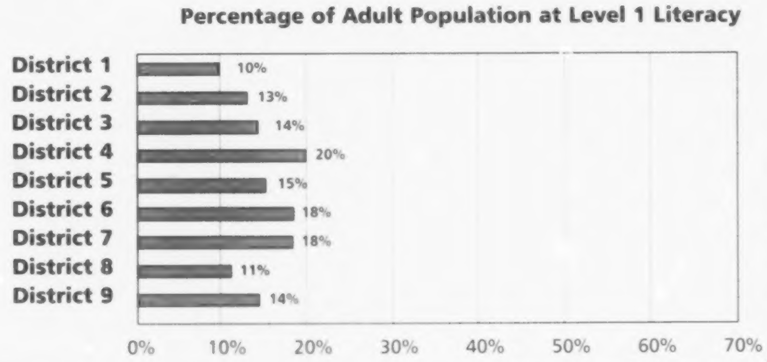
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

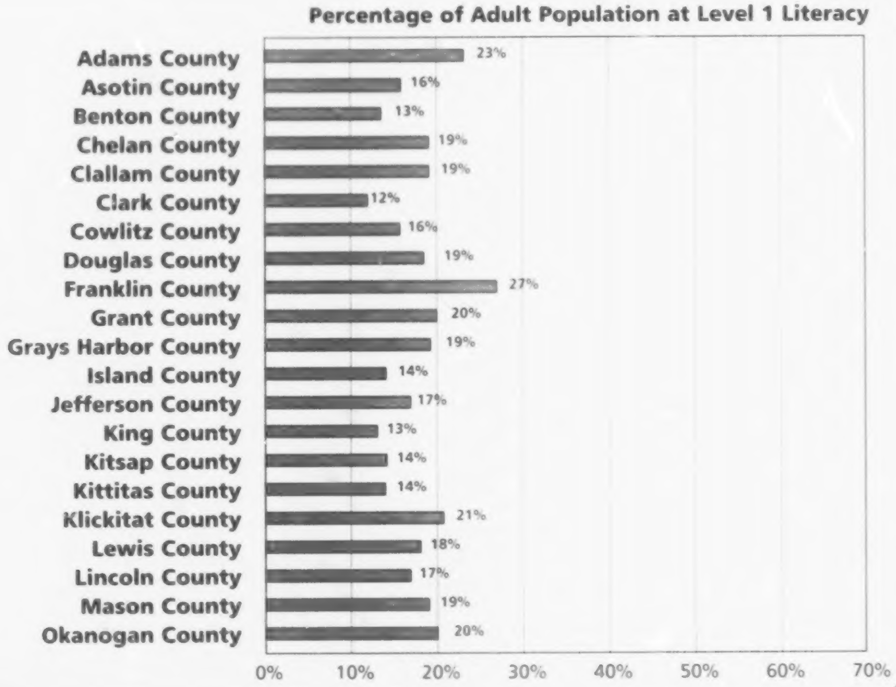
# Washington

## 15% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



* This particular synthetic estimate has a 95% confidence interval larger than + or - 5 points, and should be used with corresponding caution.

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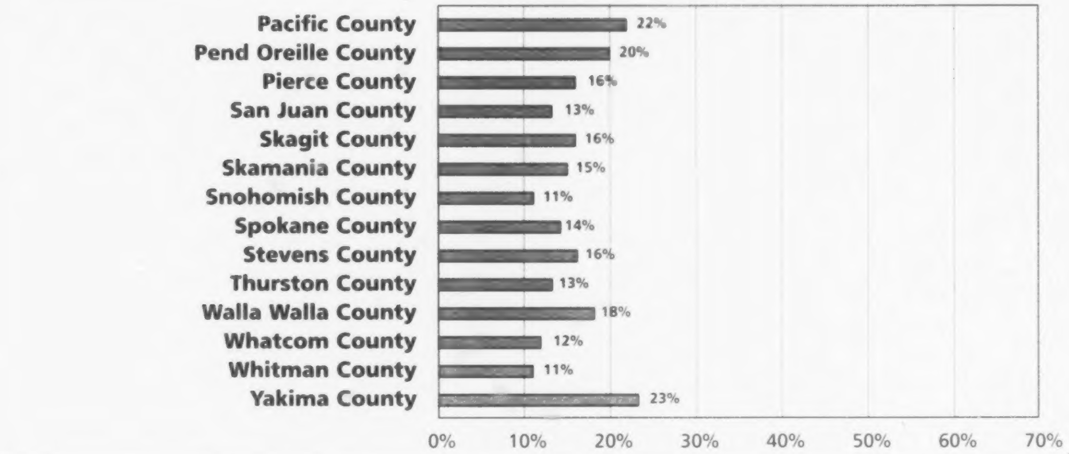
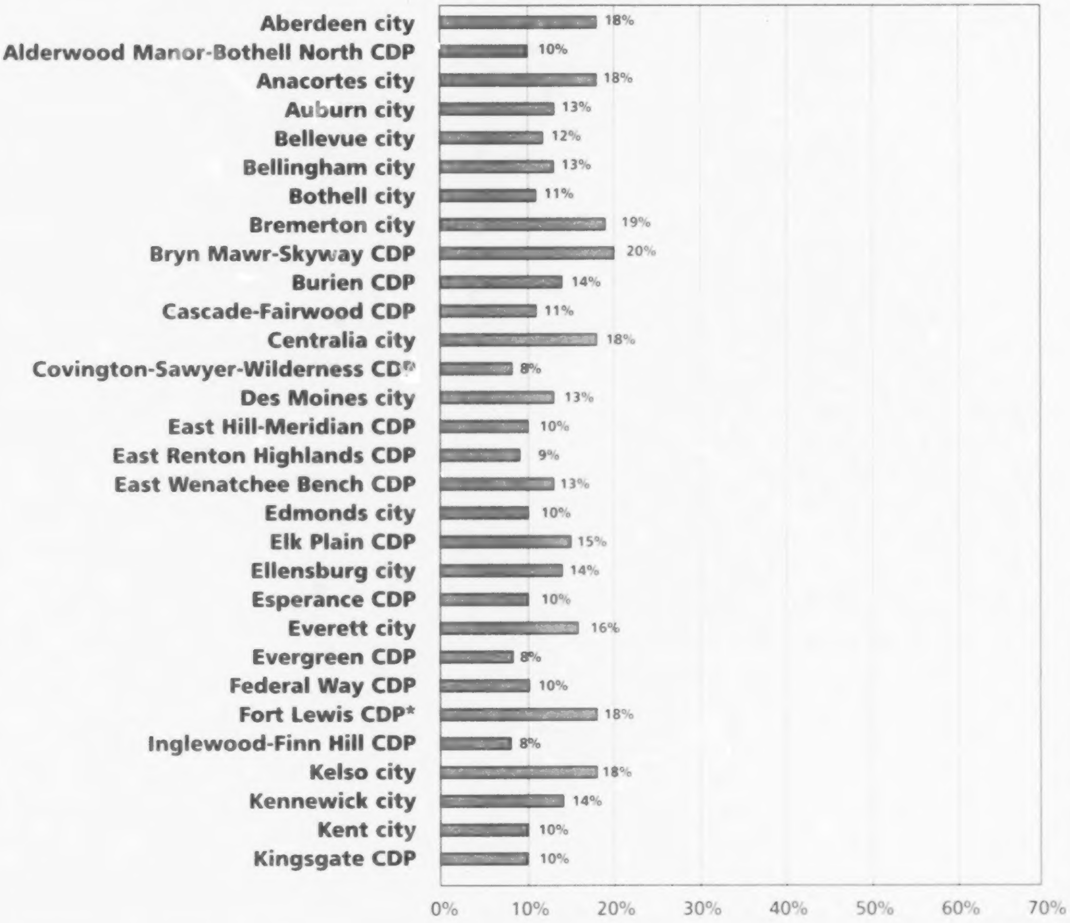
## Counties (cont.)

Percentage of Adult Population at Level 1 Literacy



## Municipalities (with adult populations of at least 5,000)

Percentage of Adult Population at Level 1 Literacy



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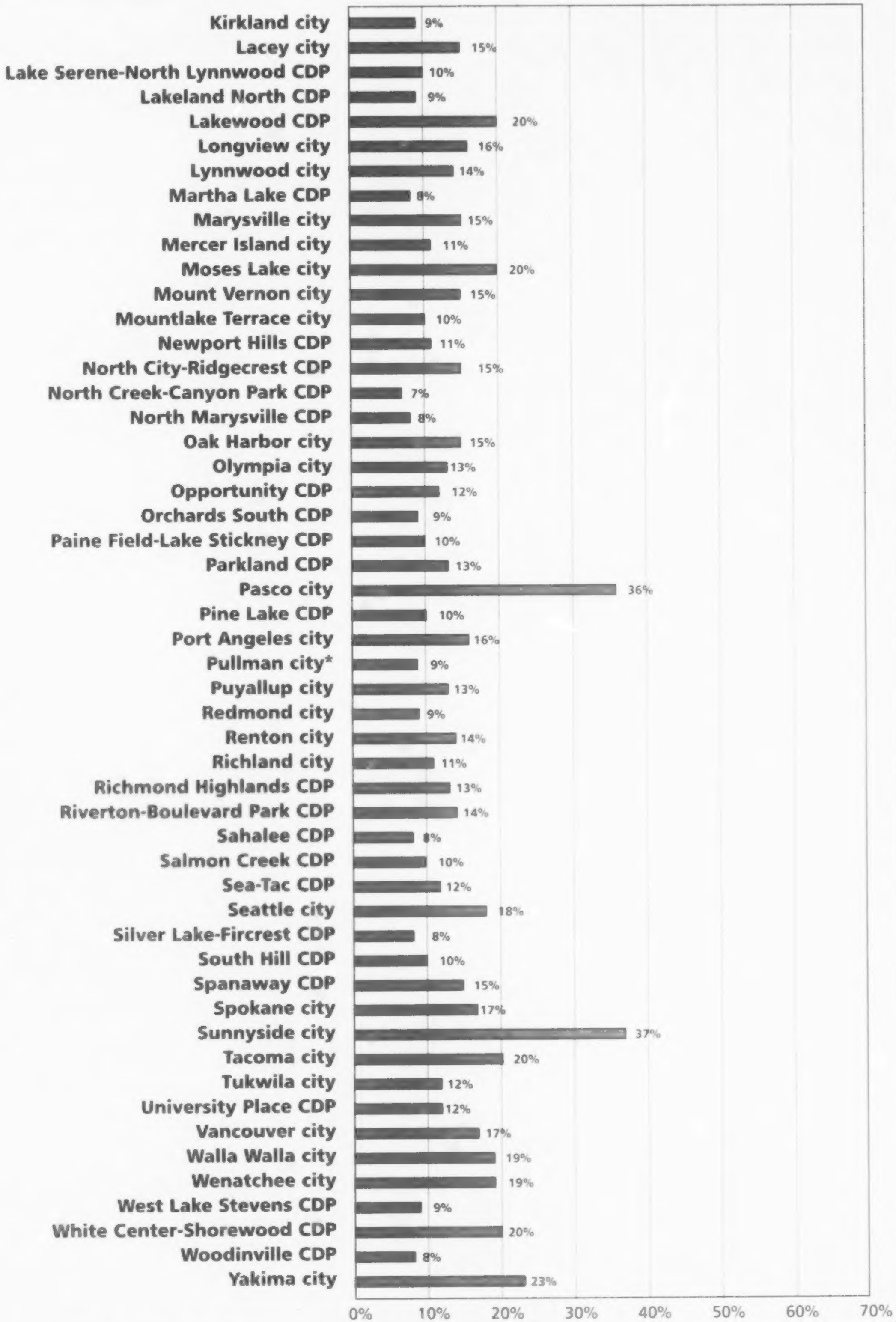
## Municipalities (cont.)

Percentage of Adult Population at Level 1 Literacy



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# The State of Literacy in America: Washington

## Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

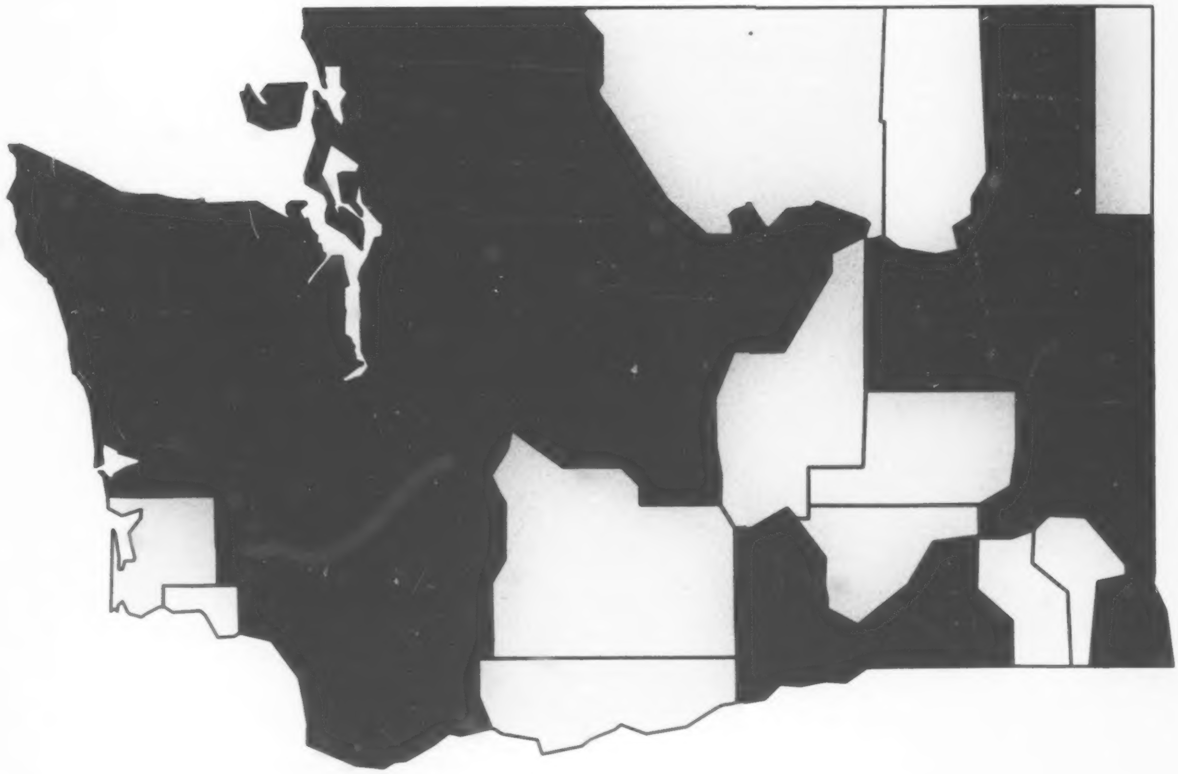
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: Washington

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills
■ 30% or greater (1)
☐ 20% to 30% (1)
■ 15% to 20% (1)
■ 10% to 15% (4)
■ 10% or less (6)
☐ no estimate available (14)

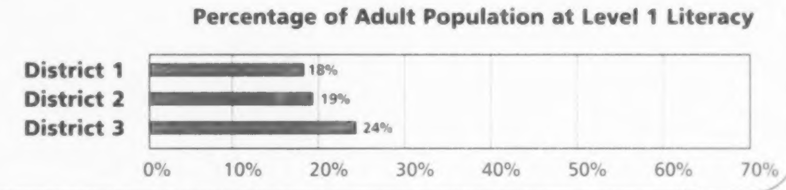
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

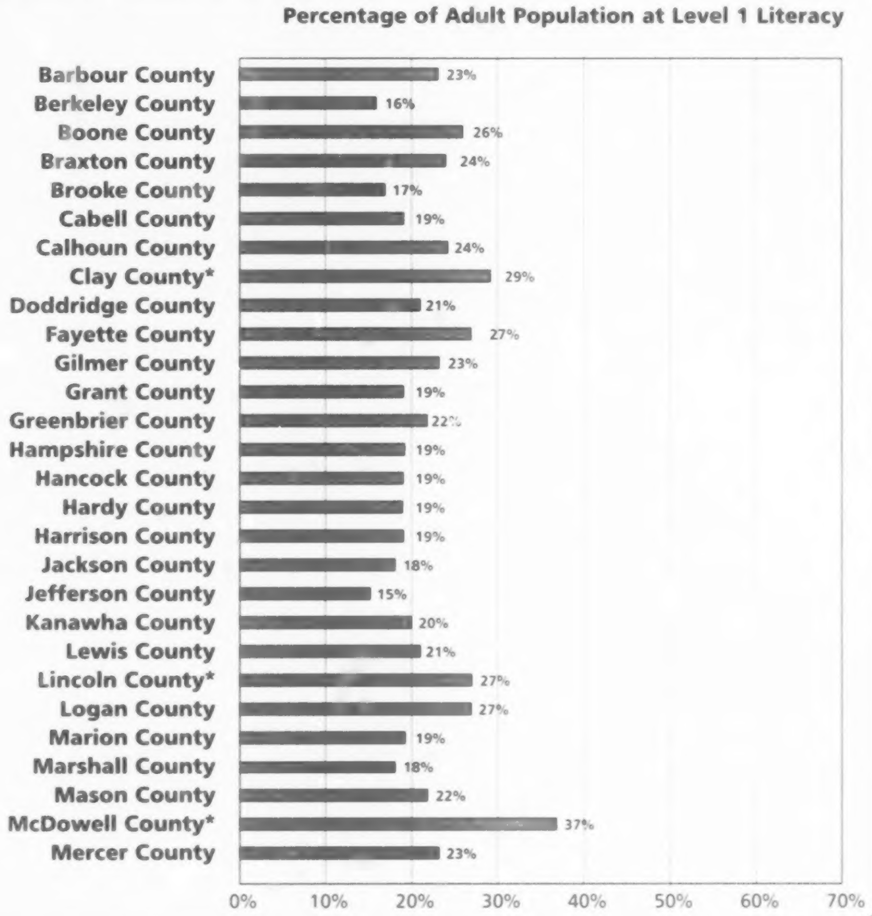
# West Virginia

## 20% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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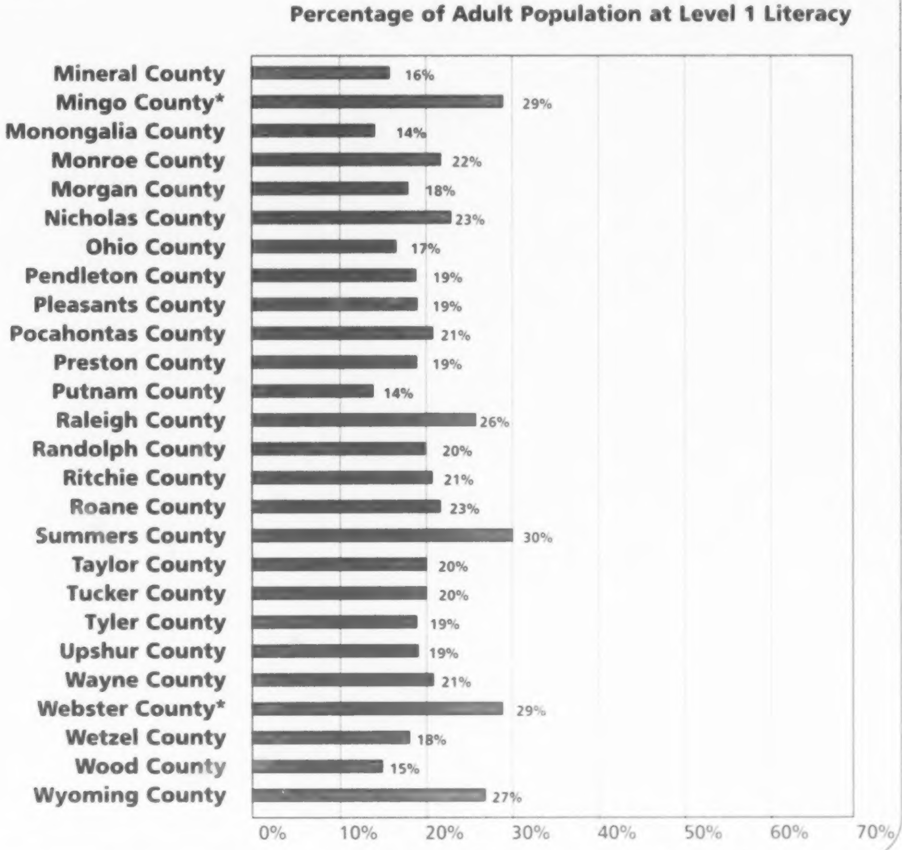
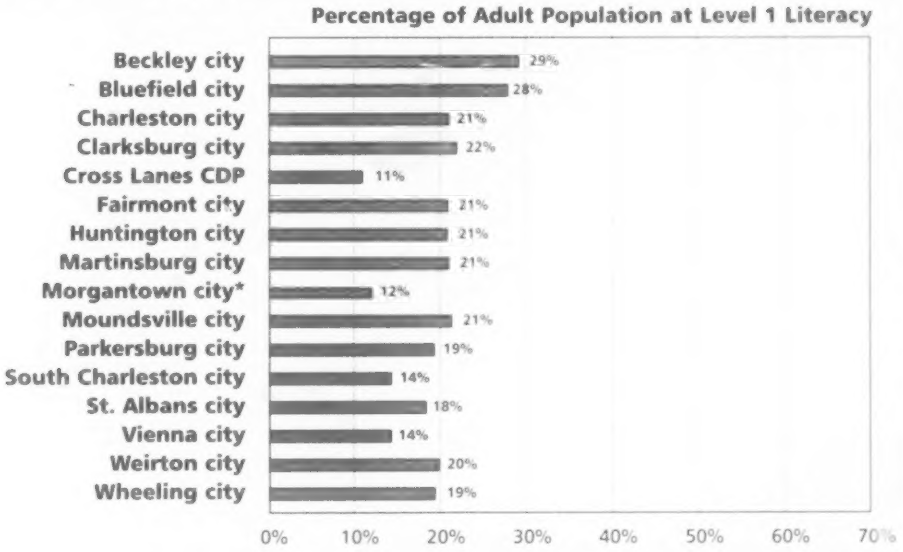
## Counties (cont.)



## Municipalities (with adult populations of at least 5,000)



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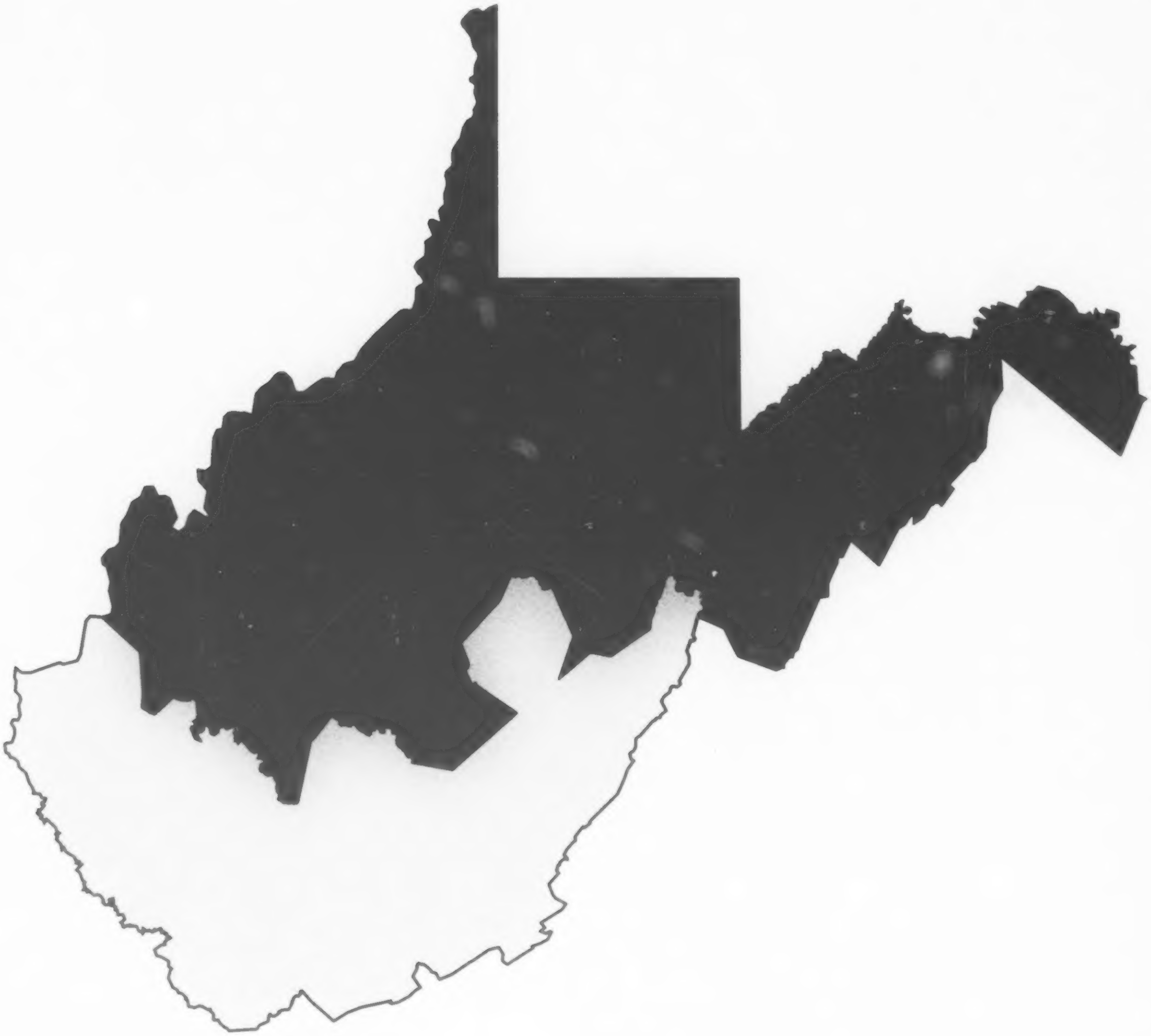
# The State of Literacy in America: West Virginia

## Level 1 Adult Literacy Rates, by Congressional District



Percentage of adult population with Level 1 Literacy skills

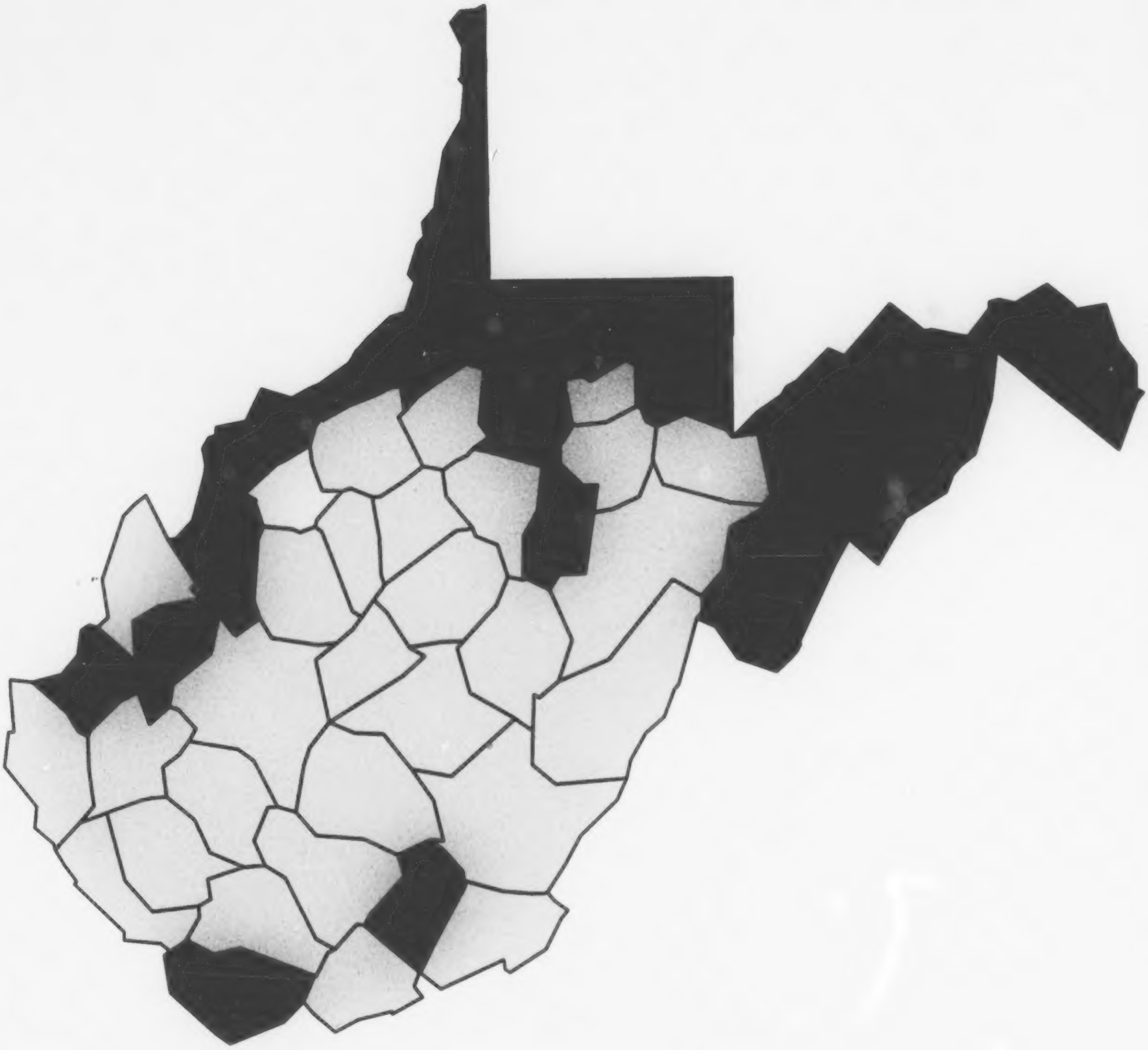
| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ☐ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| ☐ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# The State of Literacy in America: West Virginia

## Level 1 Adult Literacy Rates, by County

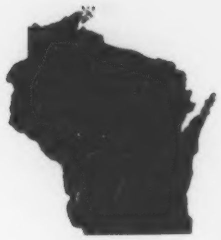


Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

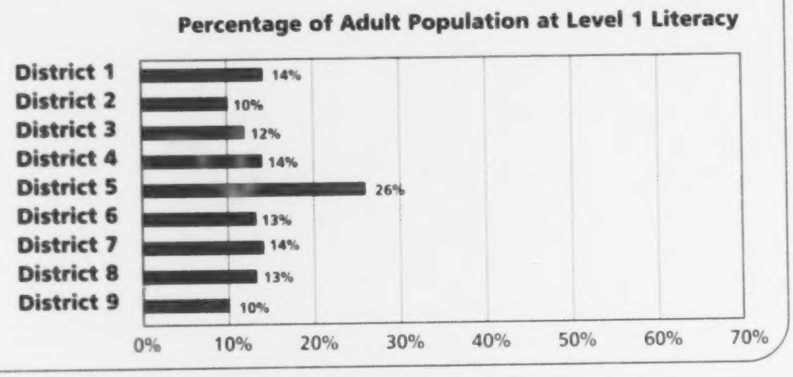
Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).



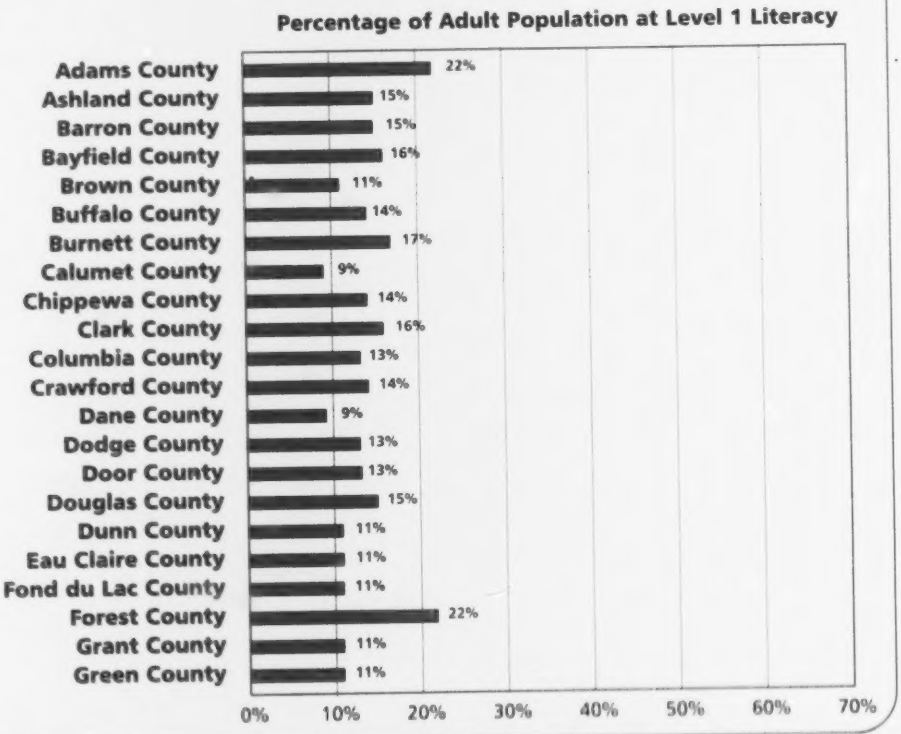
# Wisconsin

## 14% of adult population is at Level 1 Literacy

### Congressional Districts



### Counties (with adult populations of at least 5,000)



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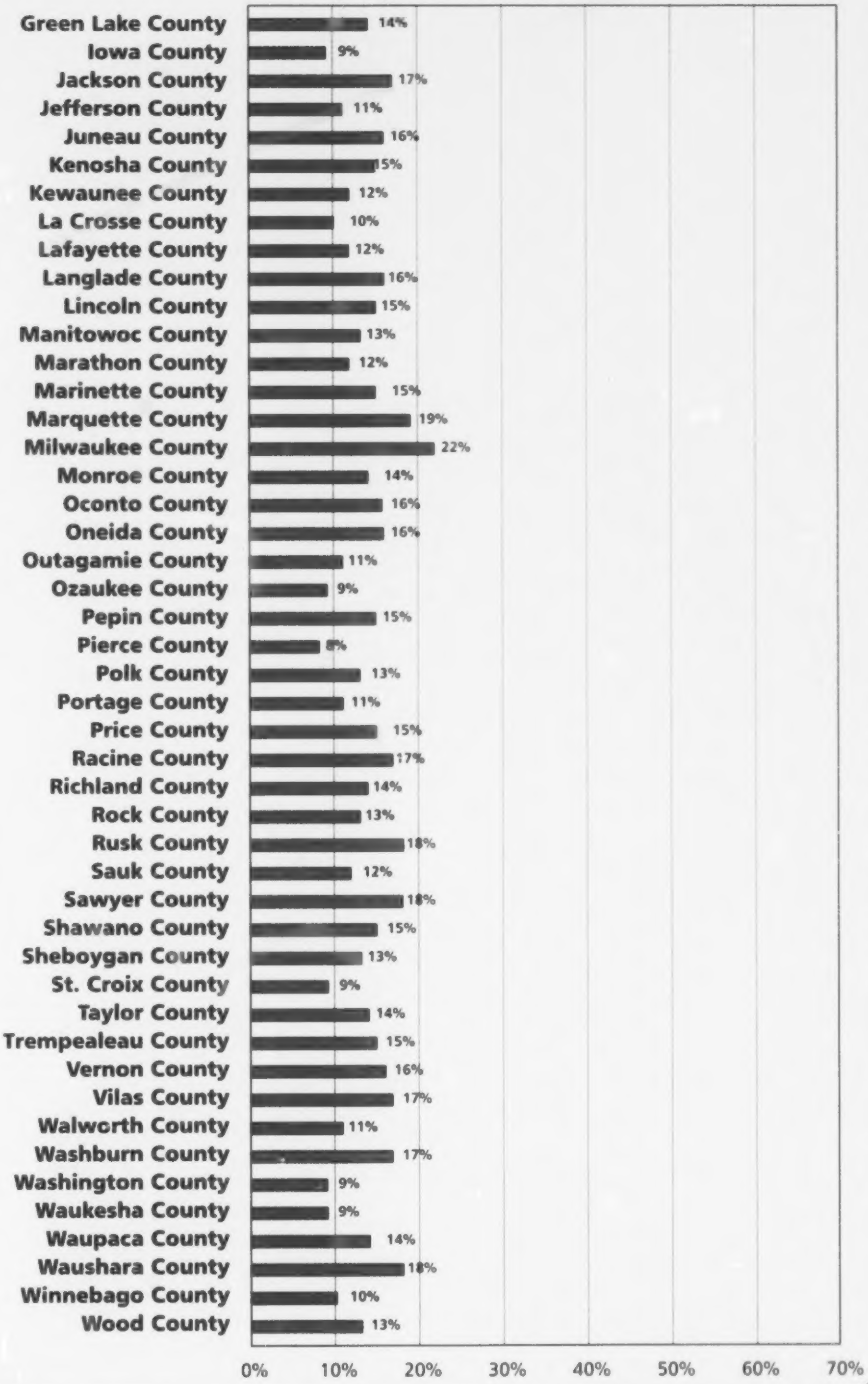
## Counties

Percentage of Adult Population at Level 1 Literacy



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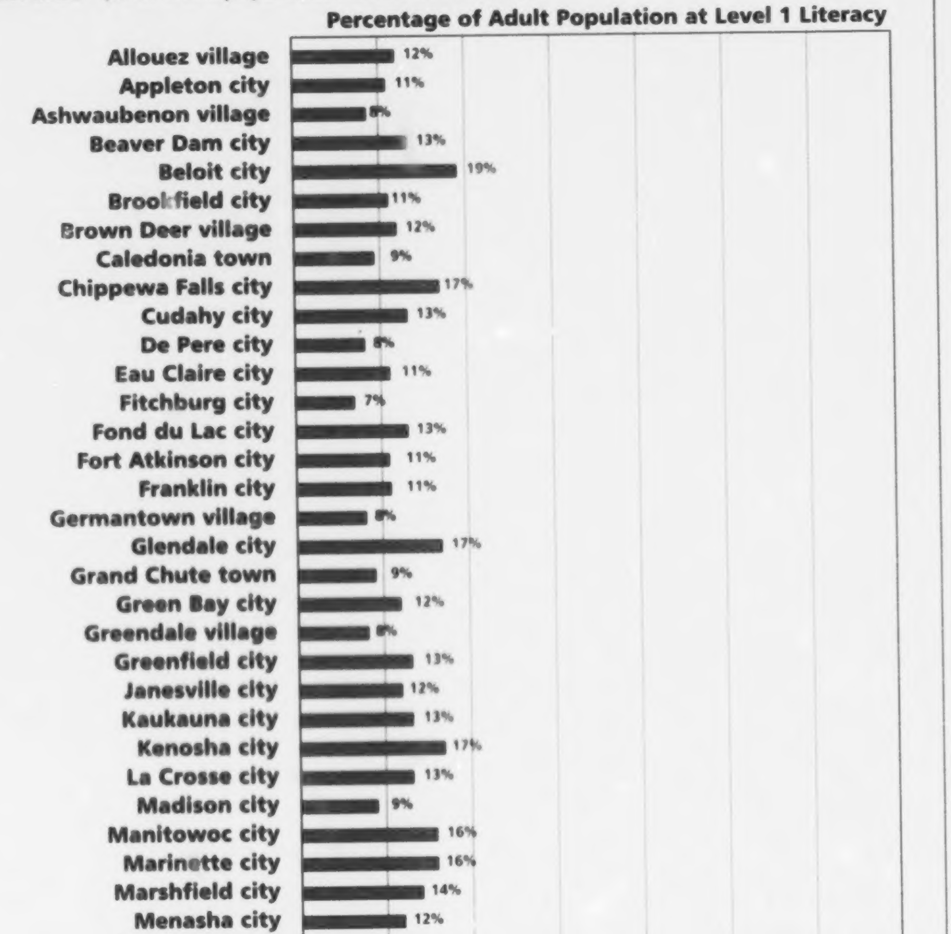
## Municipalities (with adult populations of at least 5,000)



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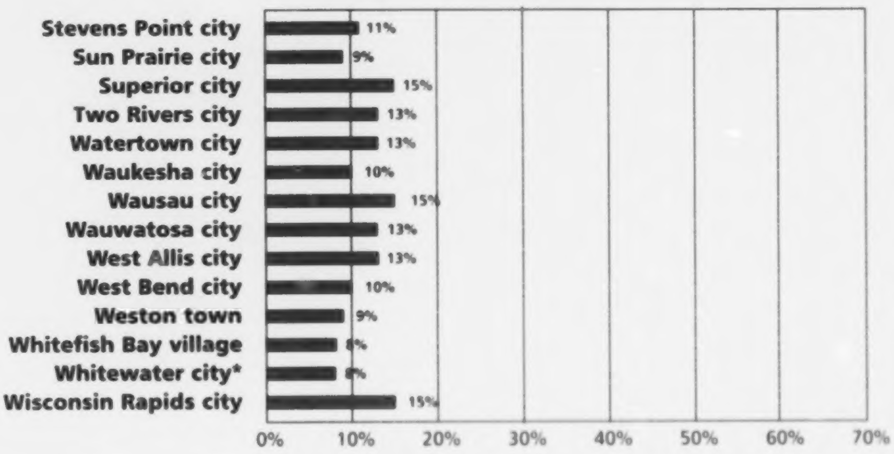
## Municipalities (cont.)



Percentage of Adult Population at Level 1 Literacy

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# The State of Literacy in America: Wisconsin

## Level 1 Adult Literacy Rates, by Congressional District

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ▨ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

# The State of Literacy in America: Wisconsin

## Level 1 Adult Literacy Rates, by County

Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| ▨ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| ☐ | no estimate available | (14) |

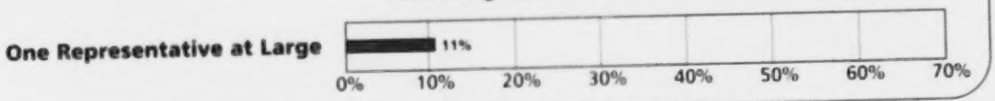
Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

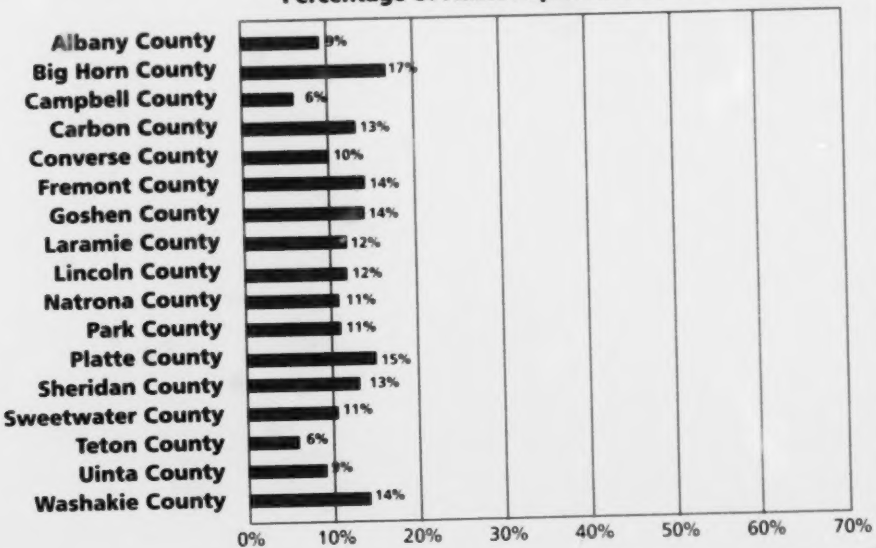
# Wyoming

## 11% of adult population is at Level 1 Literacy

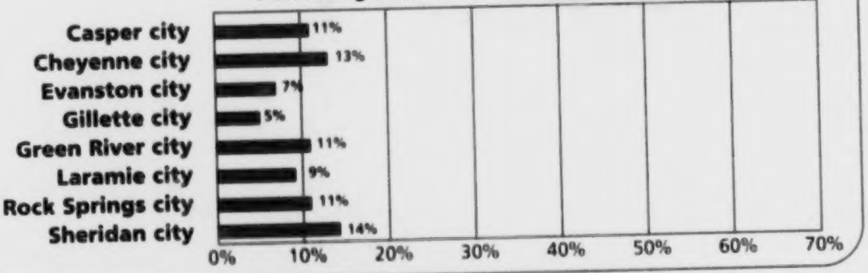
### Congressional Districts


Percentage of Adult Population at Level 1 Literacy

### Counties (with adult populations of at least 5,000)


Percentage of Adult Population at Level 1 Literacy

### Municipalities (with adult populations of at least 5,000)


Percentage of Adult Population at Level 1 Literacy

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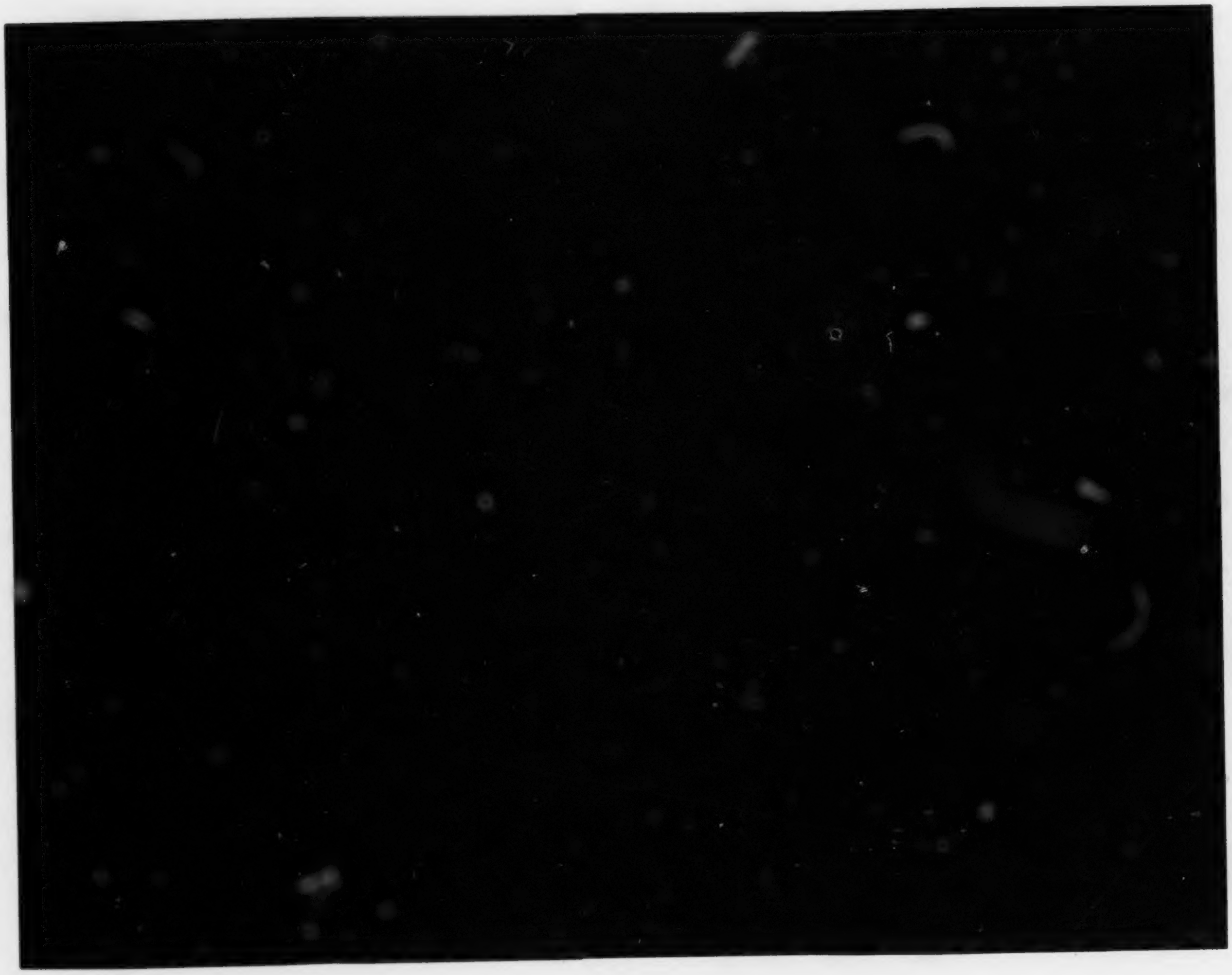
# The State of Literacy in America: Wyoming

## Level 1 Adult Literacy Rates, by Congressional District



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Division of Adult Education and Literacy

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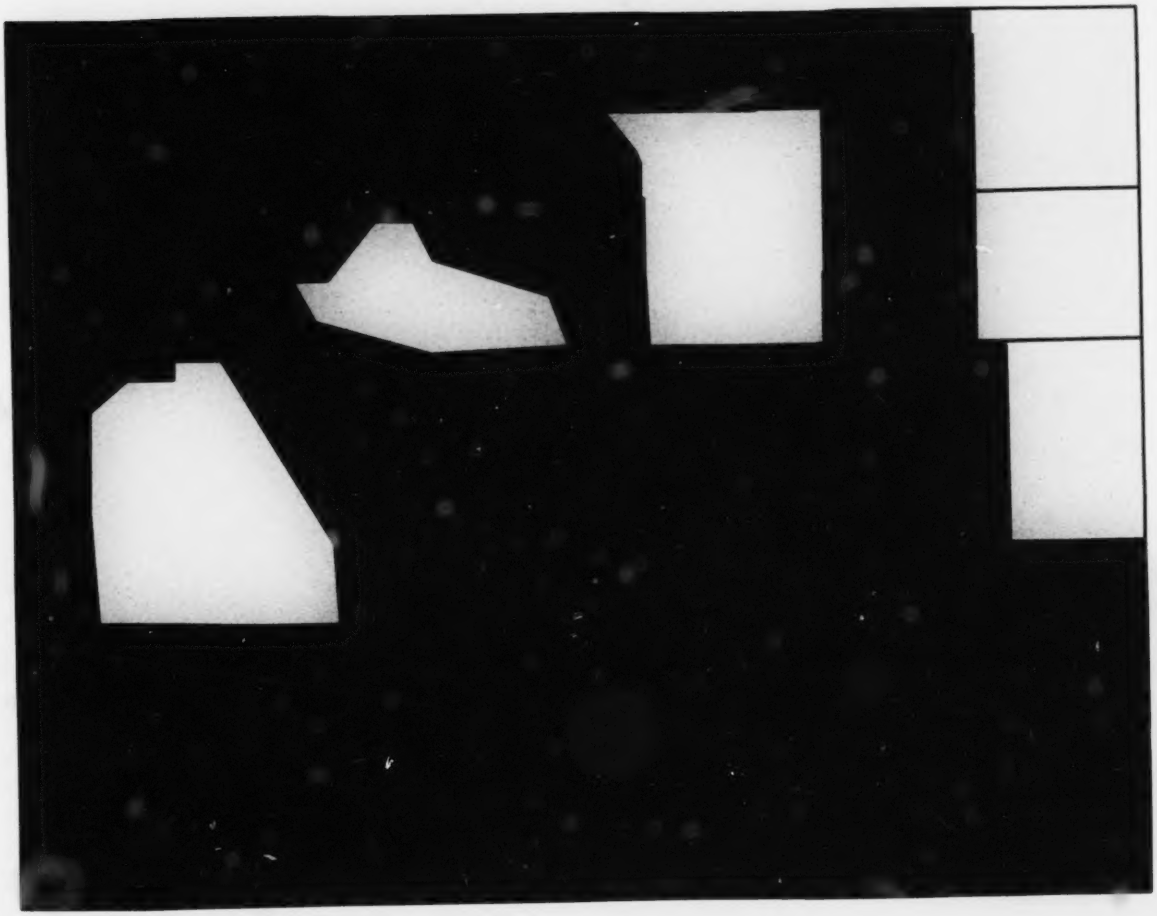
Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

# The State of Literacy in America: Wyoming

## Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

| | | |
|---|---|---|
| ■ | 30% or greater | (1) |
| □ | 20% to 30% | (1) |
| ■ | 15% to 20% | (1) |
| ■ | 10% to 15% | (4) |
| ■ | 10% or less | (6) |
| □ | no estimate available | (14) |

Source: U.S. Department of Education
Division of Adult Education and Literacy

Refer to the Frequently Asked Questions (FAQs), and to Appendix 1, the Technical Report, for additional information about these estimates. Information about the confidence interval/standard error associated with each estimate and other levels of literacy is available in a searchable database on the NIFL home page (http://www.nifl.gov).

# Appendix 1:

# SYNTHETIC ESTIMATES OF LITERACY PROFICIENCY FOR SMALL CENSUS AREAS

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Division of Adult Education and Literacy
Office of Vocational and Adult Education
U.S. Department of Education[2]

Revised for Internet Publication
October 1997

# INTRODUCTION

Adult literacy is increasingly seen as indispensable to the social and economic health of the United States. The *Goals 2000: Educate America* legislation (P.L.103-227) recognizes the importance of adult literacy as one of eight national education goals. Goal 6 states that "every adult will be literate and have the skills to compete in the global economy and participate in American democracy." The National Education Goals Panel, authorized by this legislation to monitor progress toward the goals, has adopted a specific set of adult literacy proficiency measures as the yardstick by which to judge progress toward meeting the adult literacy and lifelong learning goal (National Education Goals Panel, 1993a). These measures, developed by the Educational Testing Service (ETS), have been used in a number of state, national and international surveys of adult literacy over the past decade. In 1992, the measures were used to assess the literacy capabilities of the nation's adults age 16 and over. This National Adult Literacy Survey (NALS), carried out by ETS under contract to the National Center for Education Statistics, profiled the literacy abilities of the nation's adults on three scales: Prose, Document and Quantitative literacy (Kirsch, Jungeblut, Jenkins & Kolstad, 1993).

NALS surveyed a random sample of nearly 25,000 adults age 16 and over across the country.[3] Individuals were interviewed in their homes, providing rich background information about demographic characteristics, languages spoken, educational and occupational experiences, and their perceptions of and uses of literacy. The NALS also directly assessed respondents' abilities to perform everyday literacy tasks such as interpreting graphs and charts, extracting needed information from prose materials, completing forms, and so forth. Performance of these simulated tasks, which generally required constructed as opposed to multiple choice responses, was used to estimate individuals' Prose, Document and Quantitative proficiencies, each reported on a 0 to 500 scale. Five performance levels were designated on each scale: Level 1 (225 and under), Level 2 (226-275), Level 3 (276-325), Level 4 (326-375) and Level 5 (above 375). (Kirsch et al, 1993).

The National Education Goals Panel adopted these three proficiency scales - Prose, Document and Quantitative - as the indicators of progress toward meeting Goal 6. Both the mean proficiency of the adult population and the percentage performing at the two lowest levels are seen as useful indicators. Individual states have been utilizing these measures to monitor and report their own progress toward meeting Goal 6 (National Education Goals Panel, 1993b).

To obtain useful information about the literacy abilities and needs of their adult populations, a number of states contracted with ETS to conduct concurrent state adult literacy surveys (SALS) as part of the NALS.[4] A few other states have conducted related efforts.[5] To assist states that did not have SALS or SALS-like surveys, the Office of Vocational and Adult Education contracted for the development of techniques for estimating adult literacy proficiencies from 1990 U.S. Census data (Reder, 1994b). Those methods provided reasonably accurate estimates of state-level literacy proficiencies.

Although these synthetic state-level estimates were useful for characterizing overall state needs and progress in relation to adult literacy goals, state and local programs have found themselves in need of more locally focused data as decision-making, priority-setting and allocation of limited programmatic resources are increasingly taking place at the state and local levels. The present work is thus the outgrowth of the increasing demand for information about adult literacy proficiencies and needs in more geographically focused areas. Techniques are developed and implemented in this paper which produce relatively accurate estimates of adult literacy proficiency at the level of individual counties, congressional districts, and cities, towns and places having at least 10,000 inhabitants.

## METHOD

### Approach

The approach used here is similar to that used in the earlier synthetic estimation work of Reder (1994b). The previous work involved using regression models to predict *individual* NALS literacy proficiencies from individual background variables that are closely aligned with the 1990 U.S. Census long-form questions. These regression models were then applied to the 5% sample of Public Use Microdata Samples (PUMS) from the 1990 U.S. Census. The individual records in PUMS are sampled at random from within Public Use Microdata Areas (PUMAs), and so the literacy predictions that can be generated by applying the regression models to the PUMS records can be aggregated at the PUMA area. Unfortunately, the PUMA areas for which such synthetic literacy estimates can be generated are often not well aligned with the service areas or geographical units of interest to adult literacy programs.

The present approach utilizes a related but variant technique to produce synthetic estimates for a wider variety of Census areas. Rather than developing regression models that predict *individual* literacy proficiencies from individual PUMS records, the present approach develops statistical models which predict the literacy proficiencies of *populations* of individuals from their *aggregate* characteristics (i.e., from their collective profile in terms of demographics, educational experiences, occupations, etc.). Such models are then applied to published summary tabulations of long-form Census data for a variety of Census areas, generating estimates of literacy proficiencies for those areas.

To develop such models, individual records in the NALS data set are first aggregated into counties (the only local geographic identifiers available in the NALS records) whose aggregate literacy characteristics can be modeled in relation to background variables that can be closely aligned with 1990 U.S. Census long-form variables. The regression models can then utilized to predict literacy proficiencies for other aggregates in the summary Census tabulations.

Details of these methods, of their validation, and of the results they produce are described below.

### Data Sources

Two data sets were used to develop the synthetic estimates, one from the National Adult Literacy Survey (NALS), and one from the 1990 U.S. Census. A data tape for the NALS, provided by the Educational Testing Service, was utilized to develop regression models for predicting county-level NALS literacy proficiencies from aggregated responses to NALS background questionnaires. These regression models were then applied to summary tables of corresponding variables in the 1990 U.S. Census (long form) to generate predicted values, standard errors and confidence intervals for literacy proficiencies at the county, town/city and congressional district levels. The Census data used were extracted from the CD-ROM versions of Summary Tape File 3C for counties, cities and towns and Summary Tape File 3D for the congressional districts of the 103rd Congress.

### Variable Alignment

The valid application of regression models predicting assessed NALS literacy proficiencies to predicting literacy proficiencies from Census data requires the use of a set of common predictor variables that are closely aligned across the two data sets. By design, the NALS included numerous variables common to the long-form of the 1990 Census. The information the NALS background and Census long-form questionnaires collect in common describe such demographic characteristics as age, gender, place of birth, and educational attainment. Each questionnaire further collected information about labor force participation, employment and occupational status, income from various sources, languages spoken in the home (and ratings of oral English proficiency if other languages are spoken), marital status, household composition, and so forth.

Despite this rich potential overlap of information between NALS and long-form Census, there are several factors that limit the variables that can be closely aligned between the two data sets. Some information common to the two data sets cannot be used because the pertinent questions were not asked in a parallel fashion or recorded in terms of sufficiently similar response alternatives across the two data sets. Marital status, for example, cannot be used as a common predictor for this reason. Household poverty status, as another example, is not reported comparably in the two studies. Household-level as opposed to individual-level variables are generally difficult to align because of definitional and procedural differences between the Census and NALS.

Some variables could be made parallel across the two data sets by recoding them according to a common scale or set of response alternatives. *Age*, for example, is recorded as a continuous variable in NALS, and can thus be categorized into subranges that match the age categories in the summary Census tables. Another example is provided by the *recent immigrant* variable, which was recoded so that responses on both NALS and long-from Census questionnaires could be aligned; a person not born in the United States was defined as being a recent immigrant if he or she had immigrated to the U.S. within a 5 year period preceding the NALS interview or 1990 Census-taking; the 5 year cut off point was one of a limited number of alignment points between the alternative response categories in the 1990 Census and NALS. Educational attainment, as a third example, was recoded into a set of discrete response categories that could be aligned. Some distinctions made in one questionnaire were not made in the other. For example, distinctions among advanced degrees (e.g., master's level versus doctoral level) were made in the Census but not in the NALS, whereas distinctions among small numbers of years of education are made in the NALS but not in the Census. The GED is distinguished from a high school diploma in the NALS but not in the 1990 Census. A set of six categories of educational attainment was constructed into which all responses on both NALS and Census could be unambiguously and uniquely mapped.

There are other limitations on aligning NALS and STF variables. Because the NALS includes only individuals age 16 and above, for example, some Census variables could not be closely aligned because they are tabulated in the STF files only for a different age range. For example, place-of-birth data in the STF files is tabulated for all persons regardless of age, whereas the same information in NALS is available only for persons 16 and above. This could potentially bias the alignment of this variable across geographical aggregates (e.g., 89.4 % of the NALS population - age 16 and above - were born in the United States, compared to 90.7 % of the cradle-to-grave Census population). Another subtle population difference between NALS and Census is that for many variables, STF tabulations include military, institutionalized, and "group quarters" individuals whereas NALS includes only household residents and not these other subpopulations. Other relatively small population differences are differences in whether college students living in dormitories are included and whether adjustments have been made for apparent undercount in the 1990 U.S. Census (Census of Population and Housing, 1992; Reder, 1994b).

Despite these and other relatively minor limitations identified in Table 1, the overall alignment of the two data sets proved satisfactory as evidenced by the modeling and validation studies presented below. Details of the common variables, their coding and their alignments across the two studies are presented in Table 1. Notice that these aligned model variables are organized as sets of proportions that sum to one; the variables that are grouped together in this way are boxed together by heavier horizontal lines in the table. For example, there are seven educational attainment variables, each measured as a proportion of the population that has a certain level of educational attainment (less than high school, some high school, ..., graduate school). The variables listed in each set are non-overlapping and their corresponding proportions always sum to one.

## TABLE 1 - ALIGNED MODEL VARIABLES

| PREDICTOR | NALS VARIABLE | STF3 TABLE(S) | COMMON CODING OVER POPULATION AGGREGATES |
|---|---|---|---|
| Educ less than high school | BLB0101 | P57 | Proportion of persons age 18 and above with less than high school education |
| Educ-some high school | BLB0101 | P57 | Proportion of persons age 18 and above with some high school education |
| Educ-high school diploma/GED | BLB0101 | P57 | Proportion of persons age 18 and above with a high school diploma, GED or equivalent |
| Educ-some college | BLB0101 | P57 | Proportion of persons age 18 and above with some college education (no degree) |
| Educ-2 year college degree | BLB0101 | P57 | Proportion of persons age 18 and above with a 2 year college degree |
| Educ-4 year college degree | BLB0101 | P57 | Proportion of persons age 18 and above with a 4 year college degree |
| Educ-graduate school | BLB0101 | P57 | Proportion of persons age 18 and above with graduate/professional school education |
| White | BNF0901 | P14A,B | Proportion of persons age 16 and above identifying race as White |
| Black | BNF0901 | P14C,D | Proportion of persons age 16 and above identifyng race as Black |
| Native American | BNF0901 | P14E,F | Proportion of persons age 16 and above identifying race Native American |
| Asian/Pacific Islander | BNF0901 | P14G,H | Proportion of persons age 16 and above identifying race as Asian or Pacific Islander |
| Other race | BNF0901 | P14I, J | Proportion of persons age 16 and above identifying race as "other" |
| Age 16-24 | DAGE | P13 | Proportion of persons age 16 and above of age 16-24 |
| Age 25-34 | DAGE | P13 | Proportion of persons age 16 and above of age 25-34 |
| Age 35-44 | DAGE | P13 | Proportion of persons age 16 and above of age 35-44 |
| Age 45-54 | DAGE | P13 | Proportion of persons age 16 and above of age 45-54 |
| Age 55-64 | DAGE | P13 | Proportion of persons age 16 and above of age 55-64 |
| Age 65 & above | DAGE | P13 | Proportion of persons age 16 and above of age 65 & above |
| Hispanic | BG10701 | P15A,B | Proportion of persons age 16 and above of Hispanic origin |
| Not Hispanic | BG10701 | P15A,B | Proportion of persons age 16 and above not of Hispanic origin |
| Work disability | BLB1301 | P66 | Prop. of civilian noninstitutionalized pop. age 16 & up with a work disability |
| No work disability | BLB1301 | P66 | Prop. of civilian noninstitutionalized pop. age 16 & up without a work disability |
| Speaks English very well | DLANGBS<br>BLA1501 | P28 | Proportion of persons age 18 and above who spoke language other than English before starting school who now speak English "very well" |
| Speaks English well | " | P28 | " " " ... who now speak English "well" |
| Speaks English not well/not at all | " | P28 | " " " ... who now speak English "not well" or "not at all" |

## TABLE 1 - ALIGNED MODEL VARIABLES (Continued)

| PREDICTOR | NALS VARIABLE | STF3 TABLE(S) | COMMON CODING OVER POPULATION AGGREGATES |
|---|---|---|---|
| Recent immigrant | BNA0201 | P36 | Proportion of persons who immigrated to United States within preceding 5 years |
| Not recent immigrant | BNA0201 | P36 | Proportion of persons who did not immigrate to United States within preceding 5 years |
| U.S.-born | BLA0101 | P42 | Proportion of persons born in the United States |
| Not U.S.-born | BLA0101 | P42 | Proportion of persons born outside of in the United States |
| Did not work previous year | DWKSWRK | P76 | Proportion of persons age 16 and above who did not work in previous year |
| Worked 1-13 weeks previous year | DWKSWRK | P76 | Proportion of persons age 16 and above who worked 1-13 weeks during previous year |
| Worked 14-26 weeks previous year | DWKSWRK | P76 | Proportion of persons age 16 and above who worked 14-26 weeks during previous year |
| Worked 27-39 weeks previous year | DWKSWRK | P76 | Proportion of persons age 16 and above who worked 27-39 weeks during previous year |
| Worked 40-52 weeks previous year | DWKSWRK | P76 | Proportion of persons age 16 and above who worked 40-52 weeks during previous year |
| Laborer | BLD1001 | P78 | Proportion of employed persons 16 and above in occupational class |
| Service | BLD1001 | P78 | Proportion of employed persons 16 and above in occupational class |
| Sales/administrative support | BLD1001 | P78 | Proportion of employed persons 16 and above in occupational class |
| Professional/technical/managerial | BLD1001 | P78 | Proportion of employed persons 16 and above in occupational class |
| Not in labor force | BLD01xx<br>BD03901 | P70 | Proportion of persons not currently in labor force |
| Unemployed | " " | P70 | Proportion of persons not currently working and looking for work |
| Employed | " " | P70 | Proportion of persons currently employed (part-time or full-time) |
| Family income 0 - $4,999 | BNF0701,02 | P107 | Proportion of families with previous year's income in specified range |
| Family income $ 5,000 - $9,999 | BNF0701,02 | P107 | Proportion of families with previous year's income in specified range |
| Family income $10,000 - $14,999 | BNF0701,02 | P107 | Proportion of families with previous year's income in specified range |
| Family income $15,000 - $19,999 | BNF0701,02 | P107 | Proportion of families with previous year's income in specified range |
| Family income $20,000 - $29,999 | BNF0701,02 | P107 | Proportion of families with previous year's income in specified range |
| Family income $30,000 - $39,999 | BNF0701,02 | P107 | Proportion of families with previous year's income in specified range |
| Family income $40,000 - $49,999 | BNF0701,02 | P107 | Proportion of families with previous year's income in specified range |
| Family income $50,000 - $74,999 | BNF0701,02 | P107 | Proportion of families with previous year's income in specified range |
| Family income $75,000 & above | BNF0701,02 | P107 | Proportion of families with previous year's income in specified range |

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## TABLE 1 - ALIGNED MODEL VARIABLES (Continued)

| PREDICTOR | NALS VARIABLE | STF3 TABLE(S) | COMMON CODING OVER POPULATION AGGREGATES |
|---|---|---|---|
| Female | BG12401 | P14A .. J | Proportion of persons age 16 and above who are female |
| Male | BG12401 | P14A .. J | Proportion of persons age 16 and above who are male |
| Household size = 1 | HHSIZE | P16 | Proportion of households of given size |
| Household size = 2 | HHSIZE | P16 | Proportion of households of given size |
| Household size = 3 | HHSIZE | P16 | Proportion of households of given size |
| Household size = 4 | HHSIZE | P16 | Proportion of households of given size |
| Household size = 5 | HHSIZE | P16 | Proportion of households of given size |
| Household size = 6 | HHSIZE | P16 | Proportion of households of given size |
| Household size >= 7 | HHSIZE | P16 | Proportion of households of given size |
| Northeast | CENREG | REG | 1 if in Northeast Census region else 0 |
| Midwest | CENREG | REG | 1 if in Midwest Census region else 0 |
| South | CENREG | REG | 1 if in South Census region else 0 |
| West | CENREG | REG | 1 if in West Census region else 0 |

## County Aggregation

Standard federal state and county identifiers are provided in the NALS data set along with population sampling weights for each person in the survey sample. The sampling design of NALS sampled persons in households at geographically random points within a selected hierarchy of geographical strata (Kirsch et al, forthcoming).[6] For analytical purposes, the 24,944 NALS household survey respondents were aggregated into 417 unique counties; the number of survey respondents per county ranged between 3 and 902.

NALS data were aggregated over these 417 counties, including the predictor variables described in Table 1 and the mean values of the dependent variables of interest for this study: the mean combined NALS literacy proficiency; the proportion of individuals having combined literacy proficiency at Level 1 (i.e., 225 and below); and the proportion with combined proficiency at either Level 1 or 2 (i.e., 275 and below).[7] NALS case weights were used in calculating all aggregated values. This aggregated data file, now with 417 cases in it, one per county, was the analytical data set for the regression modeling described below.

## Regression Modeling

Multiple linear regression techniques were used to predict the mean literacy proficiency for the county aggregates, the proportion of county scores at Level 1, and the proportion of county scores at Level 1 or 2. Separate regression models were developed for each of these dependent variables. Preliminary analyses indicated that better fitting and more robust regression models were obtained when county aggregates based on relatively small subsamples of respondents were excluded from the analyses. This should not be particularly surprising, since there is much more variability in the mean values of both independent an dependent variables aggregated over small subsamples. Analysis of regression residuals indicated that a reasonable threshold was 50 cases or more per county. Therefore, the models were developed and fitted to counties having 50 or more respondents in the survey. Of the 417 counties in the aggregate file, 178 met this criterion, whereas 239 had fewer than 50 cases and were excluded from the modeling process.

Weighted least squares (WLS) regression models yielded considerably better fits than ordinary least squares (OLS) models. Weighted least squares techniques are appropriate in cases where the dependent variable is heteroscedastic, i.e., does not have uniform variance at each point. Because the aggregates -- which were the units of analysis for these models -- were themselves based on varying numbers of observations, it seemed reasonable that the variance of the dependent variable being predicted would vary with the number of cases upon which it is based. Reasonable approximations to these variances would be proportional to 1/N for the mean literacy (where N is the number of cases in the given county subsample) and to p(1-p)/N for the fraction of individuals with scores below a certain value, where p is the population proportion, estimated by the observed fraction in the sample of size N. If these formulas are reasonable approximations (up to a multiplicative constant) of the variances of the dependent variables, then the appropriate WLS weights should be inversely proportional to the variances, i.e., a weight proportional to N for the mean literacy equation and to p(1-p)/N for the fraction of cases below some threshold literacy value, where N is the county subsample size and p is the sample proportion of cases below the target literacy value.

Using these regression weights, highly predictive equations for the dependent variables were identified using common WLS regression techniques.[8] A number of transformations were applied to the dependent variables that were proportions, i.e., the proportion at Level 1 and the proportion at Level 1 or 2. Logit, probit, arcsin and square root transformations were applied to these dependent variables in an attempt to normalize their distributions and improve the fit of the regression models. But the best fitting models for these dependent variables turned out to be ones which directly predicted the simple proportions rather than some transformation of the proportions.

## RESULTS

The variables appearing in the final (i.e., best-fitting) WLS regression equations are indicated in Table 2. Significant predictors are marked with an "x" in Table 2 in the column(s) corresponding to the equation(s) in which they play a statistically significant role. For example, each variable representing a different level of educational attainment is a significant predictor of mean proficiency. Notice that within each set of related variables, one (e.g., educ less than high school) is preceded by an "*" and is followed by a shaded row; this indicates that the variable was not included in the regressions, since it is a perfect linear combination of the others in the set (variables in a set always sum to 1).

Some variables listed in Table 1 -- age, gender, family income, household size, U.S. birth place -- do not appear in Table 2. That is because those variables are not statistically significant predictors of any of the three dependent variables. The fact that these variables do not appear predictive of the *aggregate* literacy data does *not* necessarily indicate mean they are not important predictors of *individual* literacy. For example, although age is a strong predictor of individual literacy (Kirsch et al, 1993; Reder, 1994b), it does not predict differences here among literacy scores at the county level. Apparently, existing differences in the age distribution of county populations are not strongly associated with differences among those counties in adult literacy.

TABLE 2 - Significant Predictor Variables in the Regression Models

| PREDICTOR | MEAN PROFICIENCY | % AT LEVEL 1 | % AT LEVEL 1 OR 2 |
|---|---|---|---|
| *Educ less than high school | | | |
| Educ-some high school | x | | x |
| Educ-high school diploma/GED | x | x | x |
| Educ-some college | x | x | x |
| Educ-2 year college degree | x | | x |
| Educ-4 year college degree | x | | x |
| Educ-graduate school | x | x | x |
| *White | | | |
| Black | x | x | x |
| Native American | | | |
| Asian/Pacific Islander | | | |
| Other race | | | |
| Work disability | x | x | x |
| *No work disability | | | |
| *Speaks English very well | | | |
| Speaks English well | x | x | x |
| Speaks English not well/not at all | x | x | |
| Recent immigrant | x | | x |
| *Not recent immigrant | | | |
| *Did not work previous year | | | |
| Worked 1-13 weeks previous year | x | | |
| Worked 14-26 weeks previous year | | | |
| Worked 27-39 weeks previous year | | | |
| Worked 40-52 weeks previous year | | | |
| *Laborer | | | |
| Service | | | |
| Sales/administrative support | x | | |
| Professional/technical/managerial | | | |
| *Not in labor force | | | |
| Unemployed | | x | |
| Employed | x | x | x |
| Northeast | | | x |
| Midwest | x | | |
| South | | | x |
| *West | | | |

The WLS regression models using these variables fit the county-level data extremely well, as shown in Table 3. For each equation the multiple R, adjusted $R^2$, and degrees of freedom (for the regression and residuals) are shown. With R values over .9 for each of the equations, we see that these regression models account for 81 to 91 % of the variance among counties in the literacy measures, by all accounts an excellent fit. The bottom row of the table displays the *maximum* value assumed by Cook's Distance over the 178 points being fit; Cook's D is an indicator of how influential a given data point is on the regression equation, that is, how much the fit of the equation is influenced by a particular value. The small maximum values shown for Cook's D in the table (Cook's D is not bounded above by 1) is further evidence of a good-fitting model (Cook, 1977).

TABLE 3 - Summary of Fit of Regression Models

| | Equation for MEAN PROFICIENCY | Equation for PROPORTION AT LEVEL 1 | Equation for PROPORTION AT LEVEL 1 OR 2 |
|---|---|---|---|
| Multiple R | .958 | .904 | .946 |
| Adjusted $R^2$ | .911 | .808 | .886 |
| Degrees of Freedom | 15 & 162 | 9 & 168 | 13 & 164 |
| Maximum Cook's D | .099 | .263 | .078 |

Table 4 displays the unstandardized regression coefficients for the three equations. The complete regression equation is specified in each column, including the constant term displayed in the bottom row. Numerical coefficients shown in the table occur where the "x"s appeared previously in Table 2. Each is statistically significant (from zero) at the .05 level or better; blank cells in the table indicate that the corresponding coefficient is not statistically different from zero. As noted above, other variables considered in the modeling process that do not appear in the table were not significant predictors of any of the three dependent variables. Notice that negative signs on the coefficients in the mean literacy proficiency equation are associated with lower levels of average literacy, whereas negative coefficients in the other two equations are associated with higher levels of literacy (i.e., with smaller proportions of adults scoring at the lower levels of literacy). The corresponding coefficients for standardized independent variables (βs) are listed in Appendix A.

TABLE 4 - Unstandardized Coefficients for Regression Equations

| PREDICTOR | MEAN PROFICIENCY | PROPORTION AT LEVEL 1 | PROPORTION AT LEVEL 1 OR 2 |
|---|---|---|---|
| *Educ less than high school | | | |
| Educ-some high school | 79.61 | | -.382 |
| Educ-high school diploma/GED | 104.19 | -.226 | -.632 |
| Educ-some college | 123.99 | -.292 | -.787 |
| Educ-2 year college degree | 135.50 | | -1.062 |
| Educ-4 year college degree | 140.13 | | -.798 |
| Educ-graduate school | 181.57 | -.398 | -1.268 |
| *White | | | |
| Black | -48.63 | .330 | .335 |
| Native American | | | |
| Asian/Pacific Islander | | | |
| Other race | | | |
| Work disability | -25.36 | .297 | .267 |
| *No work disability | | | |
| *Speaks English very well | | | |
| Speaks English well | -65.46 | .414 | .596 |
| Speaks English not well/not at all | -60.95 | .710 | |
| Recent immigrant | -52.60 | | .487 |
| *Not recent immigrant | | | |
| *Did not work previous year | | | |
| Worked 1-13 weeks previous year | 71.15 | | |
| Worked 14-26 weeks previous year | | | |
| Worked 27-39 weeks previous year | | | |
| Worked 40-52 weeks previous year | | | |
| *Laborer | | | |
| Service | | | |
| Sales/administrative support | 17.71 | -.228 | |
| Professional/technical/managerial | | -.142 | |
| *Not in labor force | | | |
| Unemployed | | -.222 | |
| Employed | 32.45 | -.288 | -.295 |
| Northeast | | | .028 |
| Midwest | 3.75 | | |
| South | | | .026 |
| *West | | | |
| CONSTANT | 149.13 | .431 | 1.183 |

Figures 1, 2 and 3 display the relationships between the predicted and observed values for the three dependent variables. The strong correlation between observed and predicted values is evident in each of these scatterplots.

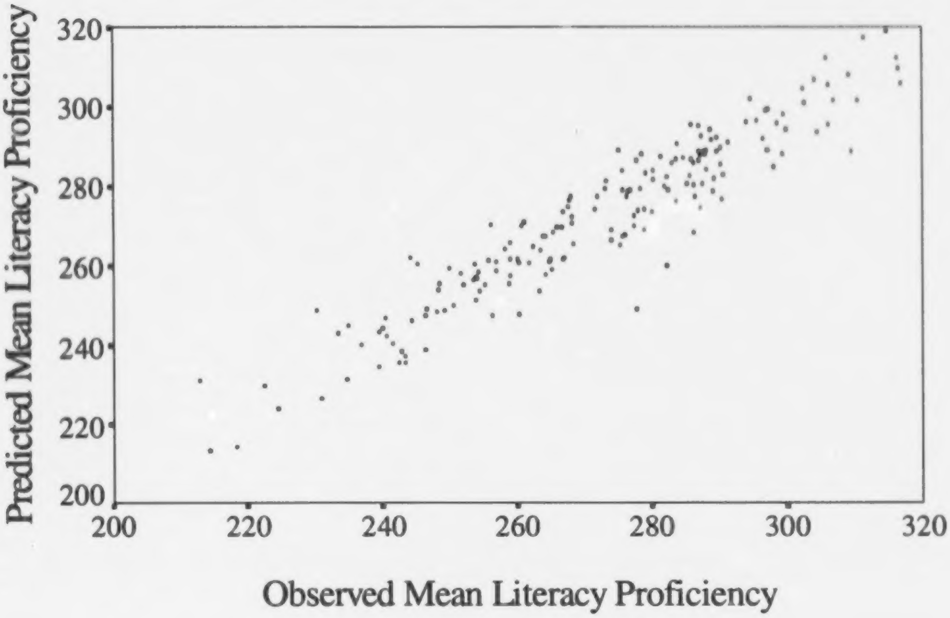

*Figure 1. Scatterplot of predicted versus observed mean literacy proficiency for county aggregates.*

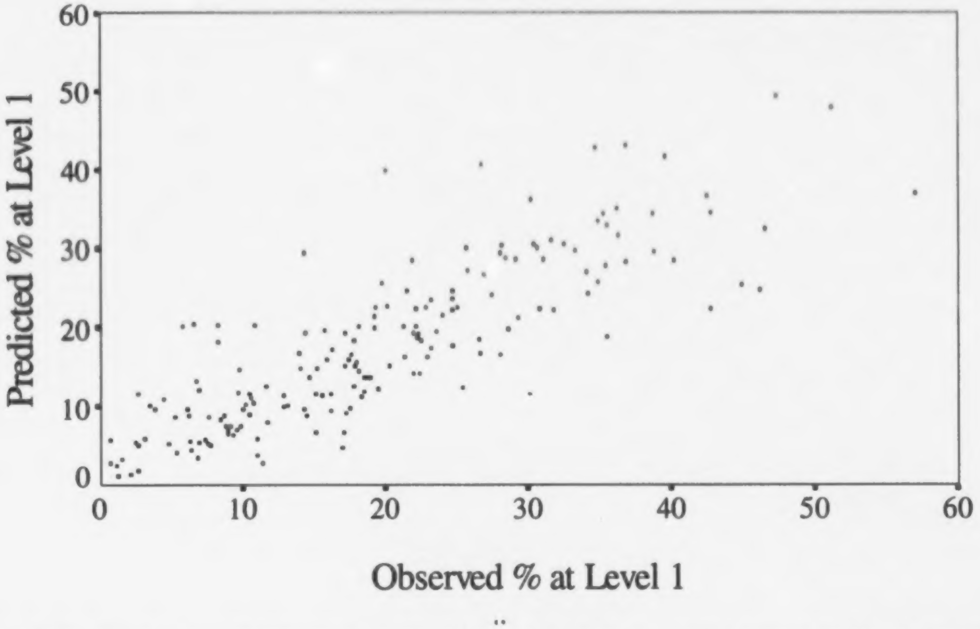

*Figure 2. Scatterplot of predicted versus observed percent of adults in counties having combined literacy proficiency in Level 1.*

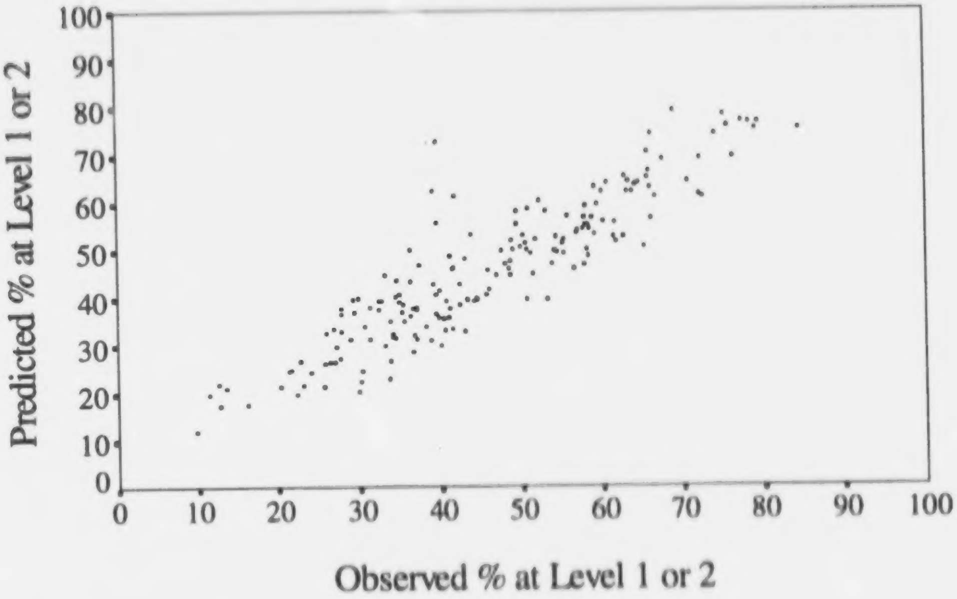

*Figure 3. Scatterplot of predicted versus observed percent of adults in counties having combined literacy proficiency in Level 1 or 2.*

Further information about the goodness of fit of these models is provided by analysis of the residuals of each equation. Figures 4, 5 and 6 exhibit scatterplots for the weighted residual by weighted predicted values for each county, one figure per dependent variable. The overall "shotgun blast" appearance of these scatterplots is additional evidence of how well the equations fit the county-level data.

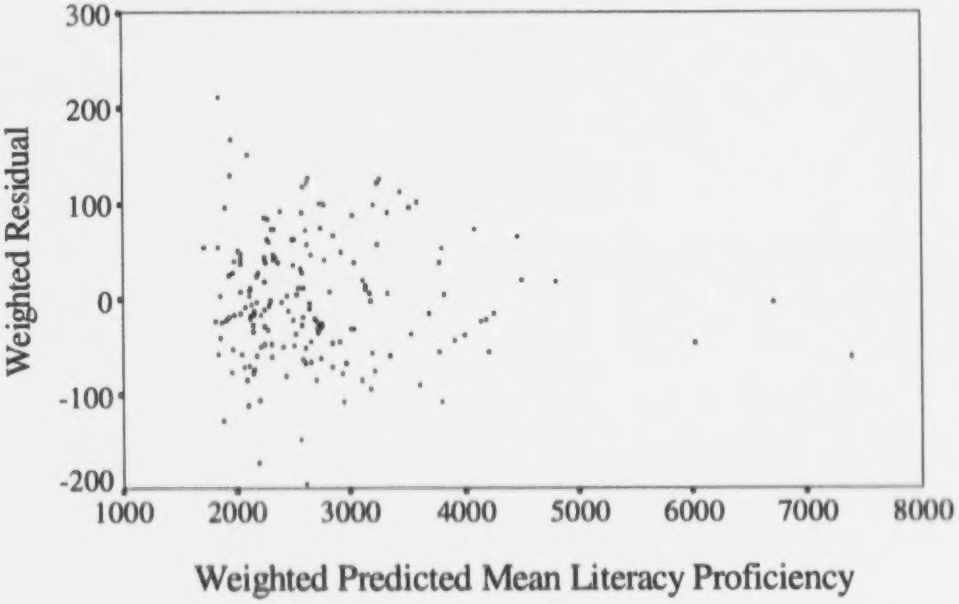

*Figure 4. Scatterplot of weighted residuals versus weighted predicted values for mean literacy proficiency of counties.*

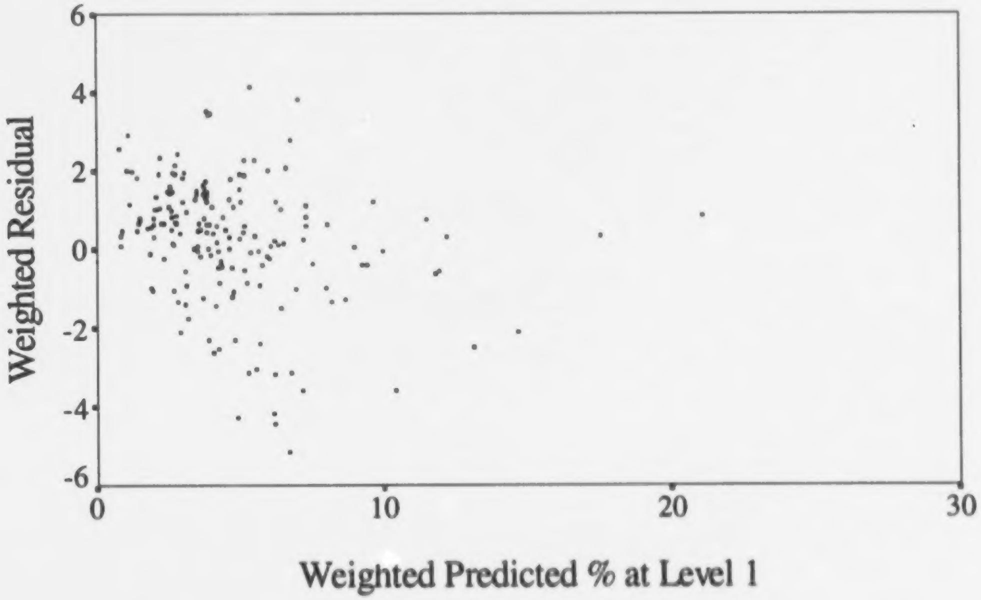

*Figure 5. Scatterplot of weighted residuals versus weighted predicted percent of adults in counties having combined literacy proficiency in Level 1.*

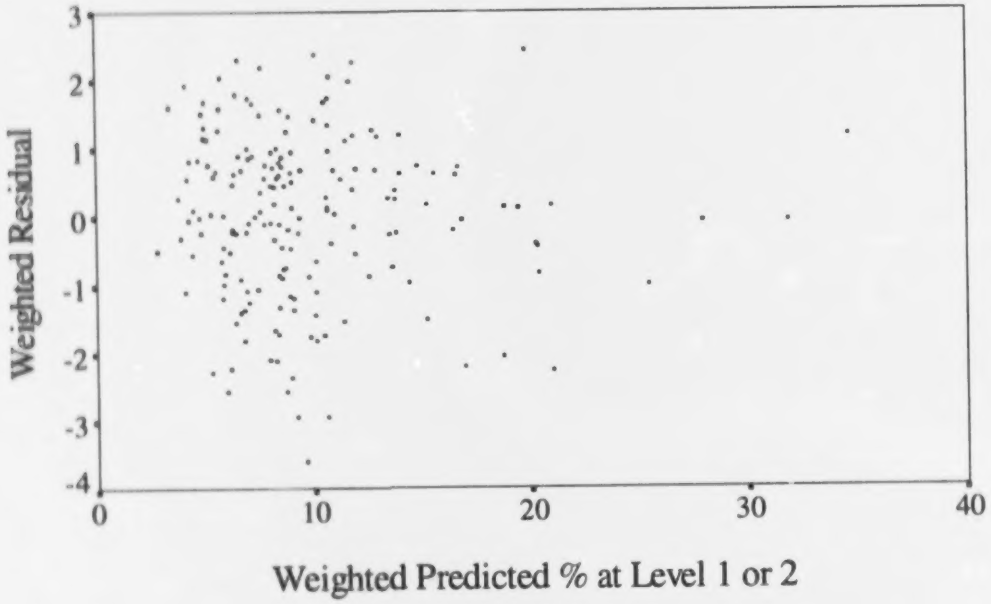

*Figure 6. Scatterplot of weighted residuals versus weighted predicted percent of adults in counties having combined literacy proficiency in Level 1 or 2.*

### Generating Predictions for Small Census Areas

The regression equations exhibited in Table 4 were applied to 1990 Census Summary Tape File 3 data (recoded as specified in Table 1) to generate literacy predictions for Census areas. Predictions were generated for the entire population (STF Geocode 00) age 16 and above within a Census-defined county (STF Summary Level 050), county subdivision (Summary Levels 061 and 062), cities, towns and places of 10,000 or more inhabitants (STF Summary Levels 161 and 170), and congressional districts of the 103rd Congress (STF Summary Level 501). For purposes of keeping standard errors acceptably low among the Census variables used as predictors, estimates were generated only for those counties, cities, towns or places having at least 5,000 inhabitants age 16 and above and a realized sample of at least 500 for the long-form of the 1990 Census. Because cities, towns and places tabulated in STF3 have a minimum of 10,000 inhabitants, all 3,154 such units met the screening criteria. Of the 4,625 counties and county subdivisions in STF3, 4,026 passed the population and sample size criteria.[9]

In each area, three measures of adult literacy were estimated for the population age 16 and above: the mean combined NALS literacy proficiency; the percentage of persons with literacy proficiencies at Level 1; and the percentage of persons with literacy proficiencies at Levels 1 or 2. Each estimate generated was accompanied by a standard error and a 95% confidence interval for the individual prediction.[10] The confidence interval takes into account not only the inherent inaccuracy of the regression model's predictions, but also the similarity, in terms of the predictor variables, of the given area to the NALS county aggregates on which the regression models were "trained"; the regression model tends to be less accurate for areas that are less similar to the NALS aggregates in terms of demographic and other predictive characteristics. Summary statistics for the standard errors and confidence intervals for each type of geographical unit are tabled in Appendix B.

Because of the large number of Census units for which these literacy estimates have been generated, they are being disseminated as electronic databases. Database files have been developed that can be viewed and printed with both personal computer software and standard Internet browsers. This software allow users to conveniently display and/or print out estimates, standard errors, and confidence intervals for the three literacy measures for Census areas, along with the local values of the predictor variables used by the equations (i.e., those listed in Table 2 or 4). The software allows users to examine the estimated literacy measures for selected states, congressional districts, counties, county subdivisions, cities, towns and places as defined by the Census STF3 geography. This software is available at several Internet locations.

### Validation through SALS Comparisons

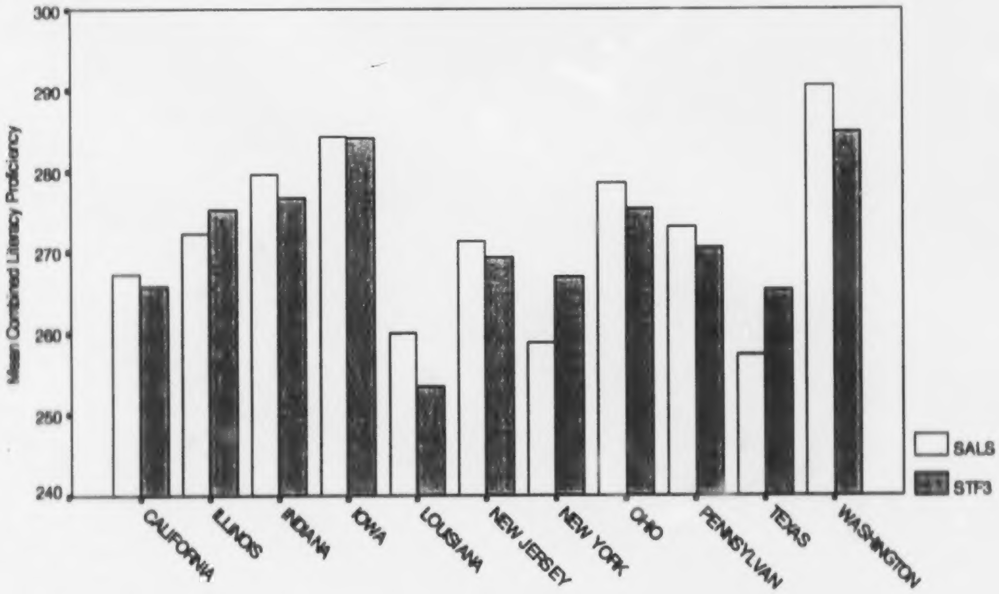

*Figure 7. Comparison of synthetic estimates derived from Census STF3 data and State Adult Literacy Survey (SALS) estimates of statewide mean literacy proficiency.*

The same procedures described above for generating literacy estimates for congressional districts, counties, cities, towns and places were also applied to state-level data in the STF3 files (Summary Level 040, Geocode 00). The statewide estimates can be compared with corresponding statewide estimates made by the State Adult Literacy Survey (SALS) for those eleven states that contracted for concurrent state-valid surveys as part of the NALS.[11] Results of this comparison are displayed in Figure 7 for mean literacy proficiency, Figure 8 for percent at Level 1, and Figure 9 for percent at Level 1 or 2.

As can be seen from the figures, the regression model developed at the county level appears to fit the state level data for the SALS states reasonably well. Most of the state-level discrepancies are within the 95% confidence interval estimated by the models.[12]

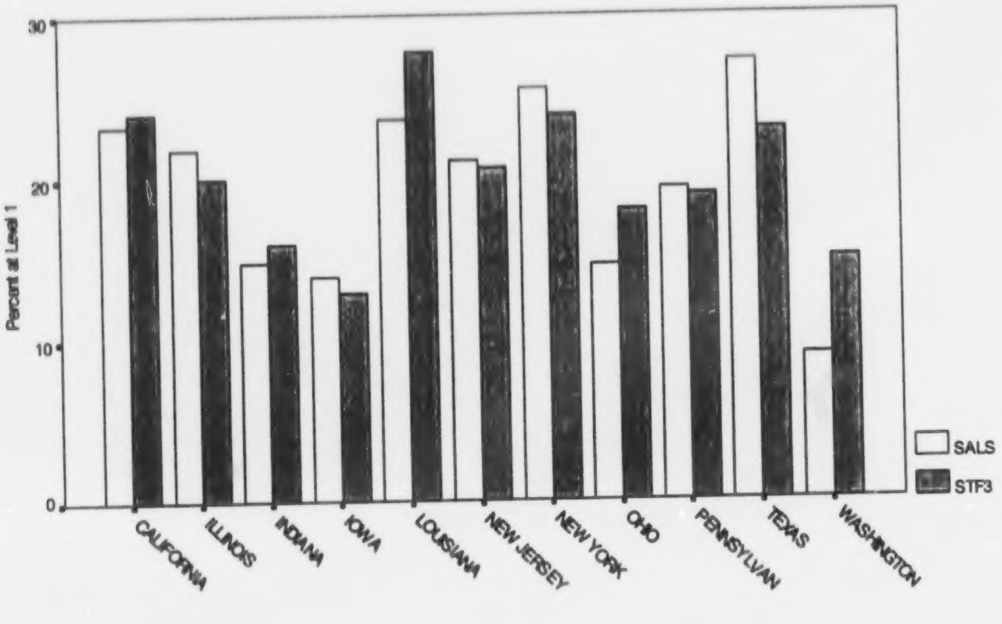

*Figure 8. Comparison of synthetic estimates derived from Census STF3 data and State Adult Literacy Survey (SALS) estimates of the statewide percentage of adults with literacy proficiency in Level 1.*

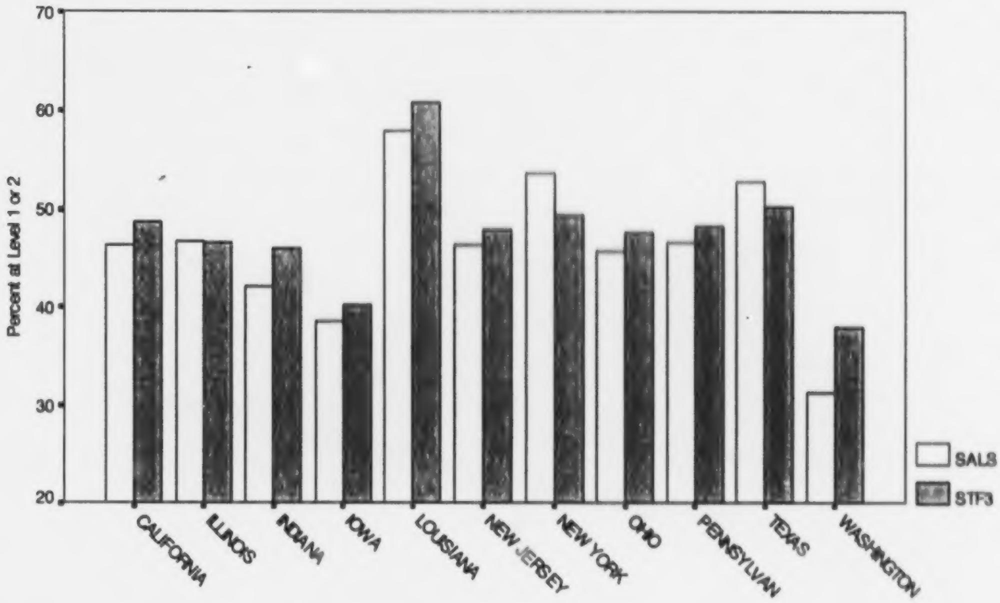

*Figure 9. Comparison of synthetic estimates derived from Census STF3 data and State Adult Literacy Survey (SALS) estimates of the statewide percentage of adults with literacy proficiency in Level 1 or 2.*

## DISCUSSION

There are some important limitations in these synthetic estimates that should be kept in mind when using them. First of all, the regression models were developed from county-level aggregate data within NALS. Synthetic estimates have been developed not only for counties within the U.S., but also for other types of geographical units, including congressional districts, cities, towns and places of 10,000 or more inhabitants, and states. The analysis of the regression model on the county-level aggregates indicated an excellent fit of predictions to observed data. Furthermore, the state-level validation suggests that the model applies reasonably well to much larger units. As promising as these validity studies may be, there is no direct evidence available about the validity of the model's predictions for the congressional district or city/town/place Census areas. Since the NALS database contained no geographical identifiers of levels other than county or state (nor did its sampling design represent these other levels), some caution is appropriate in working with estimates at these levels. While it seems highly plausible that models which predict literacy measures accurately at county and state levels would also perform well at these other levels, the lack of direct validating information should be kept in mind when working with such estimates. On balance, these synthetic estimates should be useful for many purposes in comparing the literacy profiles and needs for service across the various units that may be relevant to decision- and policy-makers in particular contexts. Despite their shortcomings, they may often be the best information available for many geographical areas in which costly local literacy assessment surveys have not been conducted.

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# APPENDIX A:
# STANDARDIZED REGRESSION COEFFICIENTS

| PREDICTOR | MEAN PROFICIENCY | % AT LEVEL 1 | % AT LEVEL 1 OR 2 |
|---|---|---|---|
| *Educ less than high school | | | |
| Educ-some high school | .235 | | -.155 |
| Educ-high school diploma/GED | .402 | -.175 | -.326 |
| Educ-some college | .364 | -.186 | -.313 |
| Educ-2 year college degree | .149 | | -.156 |
| Educ-4 year college degree | .324 | | -.255 |
| Educ-graduate school | .472 | -.232 | -.468 |
| *White | | | |
| Black | -.298 | .319 | .276 |
| Native American | | | |
| Asian/Pacific Islander | | | |
| Other race | | | |
| Work disability | -.067 | .133 | .096 |
| *No work disability | | | |
| *Speaks English very well | | | |
| Speaks English well | -.147 | .146 | .179 |
| Speaks English not well/not at all | -.189 | .318 | |
| Recent immigrant | -.085 | | .104 |
| *Not recent immigrant | | | |
| *Did not work previous year | | | |
| Worked 1-13 weeks previous year | .090 | | |
| Worked 14-26 weeks previous year | | | |
| Worked 27-39 weeks previous year | | | |
| Worked 40-52 weeks previous year | | | |
| *Laborer | | | |
| Service | | | |
| Sales/administrative support | .055 | | |
| Professional/technical/managerial | | | |
| *Not in labor force | | | |
| Unemployed | | -.072 | |
| Employed | .151 | -.249 | -.186 |
| Northeast | | | .071 |
| Midwest | .075 | | |
| South | | | .070 |
| *West | | | |

# APPENDIX B:
# PRECISION OF SYNTHETIC ESTIMATES

| | Geographical Unit | State[a] | County[b] | Congressional District | City or Town[c] | County Subdivision[d] |
|---|---|---|---|---|---|---|
| **Prediction** | Number of entities Predicted | 51 | 2655 | 436 | 3154 | 1370 |
| Average Literacy Proficiency | Median Standard Error of Prediction | 1.31 | 1.67 | 1.48 | 1.71 | 1.70 |
| | Min. Standard Error of Prediction | 1.04 | 0.98 | 1.00 | 0.92 | 1.00 |
| | Max. Standard Error of Prediction | 2.24 | 4.57 | 3.59 | 5.71 | 4.75 |
| | Median Width of 95 % C.I. | 7.28 | 9.30 | 8.24 | 9.52 | 9.43 |
| | Min. Width of 95 % C.I. | 5.76 | 5.43 | 5.59 | 5.12 | 5.58 |
| | Max. Width of 95 % C.I. | 12.48 | 25.43 | 20.01 | 31.77 | 26.42 |
| Proportion at Level 1 | Median Standard Error of Prediction | .009 | .011 | .009 | .010 | .010 |
| | Min. Standard Error of Prediction | .006 | .007 | .006 | .005 | .006 |
| | Max. Standard Error of Prediction | .022 | .031 | .033 | .040 | .031 |
| | Median Width of 95 % C.I. | .047 | .061 | .052 | .058 | .055 |
| | Min. Width of 95 % C.I. | .036 | .036 | .036 | .030 | .035 |
| | Max. Width of 95 % C.I. | .120 | .171 | .184 | .224 | .174 |
| Proportion at Level 1 or 2 | Median Standard Error of Prediction | .011 | .014 | .013 | .015 | .015 |
| | Min. Standard Error of Prediction | .009 | .008 | .009 | .008 | .009 |
| | Max. Standard Error of Prediction | .019 | .031 | .029 | .046 | .036 |
| | Median Width of 95 % C.I. | .064 | .077 | .072 | .082 | .083 |
| | Min. Width of 95 % C.I. | .051 | .047 | .049 | .044 | .051 |
| | Max. Width of 95 % C.I. | .106 | .171 | .160 | .259 | .202 |

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[a] Includes District of Columbia

[b] Excludes counties with fewer than 5,000 individuals age 16 and above

[c] Excludes entities with fewer than 10,000 total individuals or 5,000 individuals age 16 and above

[d] Excludes county subdivisions with fewer than 5,000 individuals age 16 and above

# ENDNOTES

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[3] The NALS sample also included a component which sampled individuals incarcerated in state and federal prisons; only the household component of the NALS is pertinent here, since the prison sample was not designed for state-level disaggregation and is not included in SALS estimates.

[4] These eleven states were California, Illinois, Indiana, Iowa, Louisiana, New Jersey, New York, Ohio, Pennsylvania, Texas and Washington.

[5] Florida also conducted a SALS survey, but after the NALS had been completed. Oregon and Mississippi conducted similar surveys of their adult populations, but limited the age range involved (Oregon surveyed those 16-65, whereas Mississippi surveyed the 16-75 age range).

[6] The public use version of the NALS data set masks county identifiers for those counties having relatively small populations in order to protect respondents' confidentiality. The version of the data set used in these analyses did not mask the identifiers of counties with small populations. In the end, however, this did not matter, since only counties with NALS subsamples of at least 50 survey respondents were used in the regression modeling, and all such counties were sufficiently large to have unmasked identifiers. Thus individuals wishing to replicate or extend this modeling can do so with the public use data set.

[7] The combined literacy proficiency was calculated as the mean of the 15 plausible values imputed for each respondent - 5 for prose, 5 for document and 5 for quantitative literacy. The prose, document and quantitative scales were combined in this fashion because they are very highly intercorrelated and can be well represented by a single proficiency measure (Reder, 1994a). Previous synthetic estimate studies separately estimated the three proficiency scales and found the synthetic estimates to be even more highly intercorrelated (Reder, 1994b).

[8] SPSS for Windows 6.1.3 was used to estimate these models.

[9] All congressional districts, states and the District of Columbia met these screening criteria.

[10] The confidence intervals were calculated for the *individual* Census area rather than for the mean of all areas like it (which would be a smaller or tighter confidence interval). This is often called the *prediction interval*.

[11] A SALS survey conducted by Florida shortly after NALS is not included in this comparison.

[12] The individual SALS estimates, being based on relatively small sample sizes, have standard errors that also must be taken into account in evaluating the fit of the model's predictions to these state-level assessment results.

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